Ref.	Name	Number	Program System
	Action Center Support System	5796-ALY	DOS/VS
2.13	.. DOS/VS	5796-ALZ	
2.13	.. OS/VS	5796-PKY	VS1, VS2
2.34	ACF/VTAM and NOSP Definition Aid	5796-PLJ	OS/VS, DOS/VS, VM/370
2.35	Administering the Interactive Instructional System		
		5796-AQX	Int. Inst., Cwrtr III
2.17	Anatomy and Physiology	5796-AJG	DOS
2.8	Apparel Business System	5785-KAE	DOS/VS, VS1, VS2, VM/370
2.5	APL Continuous System Mdlg. Prgm.	5796-PLP	VS APL
2.35	APL Handbook of Techniques Workspace	5796-PEJ	VM/370 CMS
2.24	Assembler H/CMS Interface	5796-PDF	DOS/VS
2.22	Audit-Source Code Compare (DOS/VS)	5796-PDH	OS/VS
2.23	Audit-Source Code Compare (OS/VS)	5796-AQQ	CICS/OS/VS
2.16	Authorization System	5796-ANX	DOS/VS CICS/VS
2.14	Automated Bill Payment System		
		5796-AQT	DOS/VS, DOS/VSE
2.16	.. Enhancement		
2.32	APL Advanced Statistical Library	5796-PJT	DOS/VS,VS1,MVS,SVS
	.. VSAPL	5796-PJR	VS1, SVS, MVS
	.. APLSV		
2.33	APL Data Interface for:	5796-PJZ	TSO
	.. VS APL under TSO	5796-PKA	VM/370
	.. VS APL under VM/370 (CMS)	5796-PKB	VSPC
	.. VS APL under VSPC	5796-PKC	OS/VS
	.. APLSV	5796-PJB	OS/VS
2.31	APL Decision Table Processor and Code Generator	5796-PGY	OS/VS
2.28	APL Function Editor for VS APL	5796-PGX	OS/VS
2.28	APL Function Editor for APLSV	5796-PJF	OS/VS
2.31	APL GPSS (APLSV)	5796-PJG	OS/VS
2.31	APL GPSS (VS APL)	5796-PGT	OS/VS
2.28	Batch Terminal Simulator II (BTS II)		VS/1, VS/2, IMS/VS
	.. Version 1, Modification 4	5796-ANC	DOS/VS
2.13	Budget Accounting System, Online	5796-PKK	SVS, MVS
2.33	Bulk Data Transfer	5796-AQR	CICS/DOS/VS
2.16	Cardholder Acctg. System	5796-ANB	DOS/VS
2.13	Cash Application Terminal System	5796-ARH	DOS/VS
2.18	Chained Channel Command Print Subroutines		
		5796-AKR	DOS/VS
2.11	Combined Loan System Using DL/I Entry	5796-AGB	DOS/VS
2.6	Commercial Loan Accounting System	5796-PJW	DOS/VS, VS1, VS2
2.32	Computer-aided Instruction Courses APL	5796-AER	DOS/VS, OS/VS
2.5	Computer Generated Correspondence		

Ordering instructions are in the ordering guide.

Ref.	Name	Number	Program System
2.31	Counseling Process, The - A Management Training Course	5796-PJD	ITS
2.12	CAI: Algebra and Calculus, Selected Topics in	5796-ALD	DOS, OS
2.11	CAI: English Communication Skills (COMSKL/CAI)	5796-AKX	DOS, OS
2.12	CAI: Statistics and Measurements	5796-ALC	DOS, OS
2.10	CICS Message Switching System (OS/VS)	5796-AKP	OS/VS
2.10	CICS Message Switching System (DOS/VS)	5796-AKN	DOS/VS
2.21	CICS/VS Online Prompting Facility	5796-AWQ	CICS/OS/VS
2.8	CICS/VS Online Test/Debug II	5796-AHJ	DOS/VS, OS/VS1, DOS/VSE
2.20	CICS/DOS/VS 3270 Control for Remote 3600	5796-AWG	DOS/VS
2.31	CMS EXEC Enhancements	5796-PJA	VM/370-R3
2.8	COBOL Maintenance Aid (OS)	5796-AHZ	OS/VS
2.8	COBOL Maintenance Aid (DOS)	5796-AHY	DOS/VS
2.21	Data Base Documentation (IMSMAP) for IMS Version 2.3	5796-PBC	OS/VS
2.21	Data Communications Analyzer (DCANALYZER)	5796-PCA	OS, OS/VS
2.10	Data Entry Control and Audit Sys for DOS POWER/VS	5796-AKC	DOS/VS
2.35	Data Extraction, Processing and Restructuring System	5796-PLH	OS/VS, IMS/VS
2.17	Delegation Mgmt. Training Course	5796-AQY	Int. Train. Int.
2.6	Demand Deposit Accounting System, IMS Online	5796-AFN	OS/VS2
2.35	Departmental Reporting System	5796-PLN	VM/CMS, MVS-TSO, CICS/VS, VSPC
2.19	DISCOVER: The Career Guidance System	5796-ARY	DOS/VS, OS/VS
2.25	Disk Volume Map	5796-PFL	OS/VS MFT MVT
2.27	Diskette Sort (3540)	5796-PGJ	DOS/VS
2.32	Display Editing System for CMS	5796-PJP	VM/370 CMS
2.26	Distributed Computing System:		
	. . Event Driven Executive Host Com. Fac.	5796-PGH	OS/VS
2.32	DBPROTOTYPE II	5796-PJK	OS/VS
2.11	DL/I Batch Monitor for DOS/VS	5796-AKY	DOS/VS, DOS/VSE
2.10	DL/I DOS/VS HDAM Reorganization Utility	5796-AKF	DOS/VS
2.33	DL/I DOS/VS Space Management Utility	5796-PKF	DOS/VS, DL/I
2.6	DOS to OS for JCL, COBOL, RPG, Sort/Merge	5796-AFZ	OS, OS/VS
2.20	DOS/VS Health Care Support DL/1 Patient Care System	5796-ATZ	DOS/VS
2.9	DOS/VS Pre-sort Processor	5796-AJT	DOS/VS
2.25	DOS/VS SDL/SVA List Optimizer	5796-PFH	DOS/VS
2.13	DOS/VS System Programming Aid	5796-ALX	DOS/VS
2.22	DOSMAP-DL/I	5796-PCW	OS/VS
2.23	Econometric Planning Language, APL	5796-PDW	VM/370,DOS/VS,OS/VS
2.14	Economic Evaluation Model for PSG II/VS	5796-ANJ	Int. Inst, Cwrtr III
2.15	Elementary Math	5796-APC	VS1, MVS, SVS
2.19	Emergency Log Terminator	5796-ATN	DOS/VS, CICS/VS, DOS/VSE
2.16	EPIC: SOCRATES Online Maintenance System	5796-AQW	OS
2.5	Film Library Management System (FLMS)	5796-ACW	
2.1	File Limiting Auto Space Handler (FLASH)	5786-CAA	
2.26	Flowcharting for ITS/Coursewriter III, Fundamentals of	5796-PFY	DOS, OS
2.26	Forecasting and Time Series Analysis, APL	5796-PFX	
2.25	FORTRAN	5796-PFG	OS/VS, VM/370 CMS
2.34	FORTRAN H Ext. Opt. Enhance	5796-PKR	VM/CMS, VS1, VS2
2.30	FORTRAN Interactive Subroutine Library (FISLIB)	5796-PHT	OS/VS2,DOS/VS,VM/370
2.5	Freight Bill Audit and Rating System	5796-AEJ	OS/MVT
2.33	General Cross Assembler Generator	5796-PKD	DOS/VS, VS1, VS2
2.7	General Purpose Tape and Disk Scans	5796-AGY	DOS/VS
2.9	Generalized File Maintenance System	5796-AJJ	DOS/VS
2.20	Global Shared Access Method	5796-ATX	MVS
2.6	Graphical Analysis Program, SMF	5796-AFP	OS/VS, OS/MFT-MVT
2.25	Graphical Analysis Program	5796-PFK	APL/CMS APLSV
2.14	GIS2 and GIS/VS Library Maintenance	5796-ANG	OS/VS, OS/MFT/MVT
	Health Care Support:		
2.15	Health Care Support/DL/I:		
	. . Patient Care System	5796-ANY	OS/VS2
2.21	. . Utilization Review System	5796-AWN	DOS/VS
2.1	. . Canadian Registration System (OS)	5788-CDA	
2.2	. . Canadian Registration System (DOS)	5788-CEA	
2.1	. . Canadian Admissions System (DOS)	5788-CGA	
2.1	. . Canadian Admissions System (OS)	5788-CFA	
2.33	High Speed Sequential Retrieval for IMS/VS Data Bases	5787-LAA	OS/VS
2.32	Host Remote Node Entry System	5796-PJY	OS/VS1
2.24	HIPODRAW	5796-PFF	DOS/VS, OS/VS
2.30	IMS Application Development Facility	5796-PHX	OS/VS, MVS
2.34	IMS-APL Data Link for TSO	5796-PKW	VS/APL/TSO,SVS,MVS

IBM Canada Ltd.   INSTALLED USER PROGRAMS

Ref.	Name	Number	Program System
2.34	IMS-APL Data Link for VSPC	5796-PLA	VS APL,VS1,MVS,VSPC
2.34	IMS-CMS Data Link for VM/370	5796-PLE	VM/370
2.9	IMS HDAM Randomizer Algorithm Analyzer	5796-AJL	OS/VS
2.8	IMS Logtape Management System	5796-AHT	OS/VS2
2.31	IMS Space Management Utilities II	5796-PJJ	OS/VS
2.26	IMS Transaction Profiles	5796-PGG	OS, OS/VS
2.8	IMS 3270 Local Copy for Online Printing	5796-AHL	OS, OS/VS
2.18	IMS/VS Master Terminal Operator Training-II	5796-ARJ	OS/VS,DOS/VS,VM/370
2.19	IMS/VS Message Requeuer	5796-ATP	VS1, SVS, MVS
2.12	IMS/VS Online Data Entry System	5796-ALH	OS/VS
2.17	IMS/VS Online Data Mgmt. Utility	5796-AQZ	OS/VS
2.17	IMS/VS Response Time Monitor	5796-ARB	OS/VS
2.22	IMSMAP/VS	5796-PCY	OS/VS
2.7	Installment Loan Calculator	5796-AGR	OS/VS
2.7	Installment Loan Calculator	5796-AGQ	DOS/VS
2.23	Interactive Query and Report Processor (IQRP)	5796-PDG	OS/VS
2.10	Interactive Application Simulation Macros for ITS	5796-AJZ	OS
2.35	Interactive Circuit Design	5796-PLR	VM/CMS, DOS/VS, VS1, MVS with VAPL and APLVS
2.26	Interactive Data Management for VS BASIC	5796-PFT	OS/VS, DOS/VS
2.24	Introduction to Computers for 3270/ITS	5796-PFD	DOS, OS
2.23	Introducing ... the Computer	5796-PDX	DOS, OS
2.8	Investment Portfolio Management System	5796-AHW	OS/VS2
2.31	IQRP/TSO Interface	5796-PHZ	OS/VS2, TSO
2.24	ISAM to DL/I COBOL Program Translator:		DOS, DOS/VS
	. . DOS and DOS/VS	5796-PFB	OS, OS/VS, VM/370
	. . OS, OS/VS, VM/370	5796-PFC	OS/MFT-MVT, OS/VS
2.22	Job Control Language Editor	5796-PDC	OS/VS, OS/MFT-MVT
2.29	Job Data Compression Aid (JDCA), SMF	5796-PHN	MVS-R3, JES3
2.30	JES3 Monitoring Facility	5796-PHR	MVS, JES3
2.36	JES3 Monitoring Facility II (JMF II)	5796-PLW	DOS/VS
2.20	Laboratory Data Acquisition	5796-AWH	DOS/VS, CICS/VS
2.15	Laboratory Data Management System Enhancements	5796-APB	DOS/VS
2.20	Laboratory Data Management System II	5796-AWC	DOS/VS, DOS/VSE
2.15	Library Circulation System, Online	5796-APA	DOS/VS
2.10	Life Inquiry/Data Entry Enhancement	5796-AKD	DOS/VS
2.7	List Maintenance System, Online	5796-AGT	DOS
2.8	List Maintenance System, Online	5796-AJH	VM/370 CMS, MVS
2.33	List Processor/370 (LISP/370)	5796-PKL	
2.18	Maintenance, Engineering and Store Systems		MVS
	. . . Problem/Correction Reporting	5796-ARP	MVS
2.18	. . . Catalog Inquiry/Parts Ordering	5796-ARQ	MVS
2.19	. . . Component Maintenance	5796-ARR	MVS
2.19	. . . Time on Parts/Forecasting	5796-ARW	MVS
2.19	. . . Reliability	5796-ARX	OS/VS1, MVS
2.30	Mass Storage Control Table Maintenance Program	5796-PHY	
2.19	McGill Univ. System for Interactive Computing (MUSIC):		
	. . Release 1 (MUSIC IV)	5796-ATL	DOS/VS
2.10	Measurement and Control Hierarchical System	5796-AJY	DOS, DOS/VS
2.5	Medical Record Abstract System	5796-AFA	CICS/DOS/VS
2.16	Merchants Accounting/Data Entry	5796-AQP	ITS
2.11	Metric System, An Introduction to the	5796-AKQ	OS/VS, OS/MVT
2.22	Monitoring of Site Facilities for Host System/370/360	5796-PCE	VS1, SVS, MVS
2.32	MSS Trace/SMF Correlation Aid	5796-PJX	OS/VS
2.14	. . CICS/OS/VS	5796-ANP	OS/VS
	. . CICS/DOS/VS	5796-ANQ	DOS/VS
2.24	Numbering Systems for 3270/ITS	5796-PFE	DOS, OS
2.13	Nurse Scheduling System	5796-ANA	DOS/VS
2.34	Operator Train'g Mini-courses: Ctrl'g JES2 I/O Devices	5796-PLD	OS/VS, DOS/VS, VM/370
2.24	OS/VS1 Operator Training Exercises	5796-PFA	DOS, OS
2.27	OS/VS1 Performance Tool (VS1PT)	5796-PGL	OS/VS1
2.27	OS/VS2 Performance Tool (SVSPT)	5796-PGN	OS/VS2
2.25	Panel - A Line Cut Technique	5796-PFJ	APL/CMS APLSV
2.21	Patient Care System - Radiology	5796-AWJ	DOS/VS, VS/1, VS2 (MVS,SVS)
2.6	Payroll and Personnel System, Online - CICS/VS	5796-AFX	DOS/VS
2.16	POWER/VS Charge Back System	5796-AQJ	DOS/VS
2.18	Priority Queue Aging	5796-ARG	OS/VS1
2.5	Problem Determination for MVS Operators	5785-LAC	OS/VS, DOS/VS, VM/370
2.5	Project Evaluation & Control System	5785-EAE	VS APL
2.6	Proof of Deposit and Transit System	5796-AGA	DOS/VS
2.11	. . Enhancements	5796-AKT	DOS/VS
2.11	. . 3890 Feature	5796-AKW	DOS/VS
2.15	PL/1 File Creation for APL Data Interface	5796-PKP	OS/VS
2.4	PL/I for VSPC (VSPC PL/I)	5785-EAB	OS/VS1, MVS
2.10	PL/I F to PL/I Optimizer	5796-AKG	OS/VS
2.35	PL/I Language Construction Preprocessor	5796-PLL	OS/VS1/VS2,VM/370CMS
2.22	PMS IV Network Plotting Program	5796-PDE	OS, OS/VS
2.34	Query-By-Examples for VM/370 CMS	5796-PKT	VM/CMS

IBM IBM Canada Ltd.   INSTALLED USER PROGRAMS

Ref.	Name	Number	Program System
2.35	RACF Codes Update System	5796-PLK	MVS
2.6	Rail Car Management System	5796-AFR	OS/MVT, VS1
2.15	Response Evaluation	5796-ANZ	DOS/VS, OS/VS
2.36	Source Compare/Audit Utility	5796-PLZ	OS/VS, VM/CMS
2.34	STAIRS/VS Training Course	5796-PLF	OS/VS, DOS/VS, VM/370
2.12	Statement Preparation Sort for the 3890	5796-ALP	OS/VS1
2.27	Statistical Library, APL		
	.. APLSV and APL/CMS	5796-PGQ	OS/VS
2.27	.. VS APL	5796-PHW	OS/VS
2.9	Statutory/GAAP Valuation System	5796-AJR	DOS/VS, DOS/VSE
2.28	Stockholder Transaction Online Control System, IBM:		
	.. Basic Records & Transfer	5796-PHH	OS/VS
2.29	.. Dividend	5796-PHJ	OS/VS
2.29	.. Stocksplit & Dividend	5796-PHK	OS/VS
2.29	Storage Device Migration Aid (SDMA)	5796-PHP	OS/VS, OS/MFT-MVT
2.14	Student Registration and Accounting System, Online	5796-ANW	DOS/VS, DOS/VSE
2.28	System 360/370 Concepts and Programming (3270/ITS):		
	.. Part 1 (Concepts)	5796-PHE	DOS, OS
	.. Part 2 (Programming)	5796-PHF	DOS, OS
	.. Part 3 (System/370 Enhancements	5796-PHG	DOS, OS
2.27	SVS Performance Tool (SVSPT)	5796-PGN	SVS
2.8	SVS/MVS System and Job Impact Analysis	5796-AJF	OS/VS2
2.22	Test IMS/VS Facilities	5796-PDA	OS/VS
2.21	Test IMS Utilities for IMS Version 2.3	5796-PBE	OS
2.21	Text Editor and Composer, APL	5796-PAC	APL/360 SV CMS
2.21	TERMTEXT/Format	5796-PBR	OS
2.25	TSO Codes Update System	5796-PFR	OS/VS
2.9	TSO/MSS Archiver	5796-AJK	OS/VS2-R3
2.16	Trend Analysis/Disk Space Utilization Analysis	5796-AQK	SVS, IMS/VS
2.16	Trend Analysis/Data Base Copy	5796-AQL	SVS, IMS/VS
2.16	Trend Analysis/Time Series Data Base Maint.	5796-AQN	SVS, IMS
2.10	VIDEO Support Aids	5796-AKK	DOS/VS
2.22	VM/SGP Statistics Generating Package	5796-PDD	VM/370
2.28	VM/370 Batch Monitor	5796-PGZ	VM/370 CMS
2.23	VM/370 Graphic Monitor	5796-PDT	VM/370
2.34	VM/370 Spooling for 328X	5796-PKZ	VM/370
2.36	VS APL Extended Editor and Manager	5796-PLY	VS2(MVS, SVS)/TSO, VM/370 CMS, VS APL
2.12	VS APL for TSO	5796-ALB	OS/VS2
2.23	VS Repack	5796-PDZ	OS/VS VM-CMS
2.9	VSAM Access Routines (DOS/VS)	5796-AJX	DOS/VS
2.9	VSAM Access Routines (OS/VS)	5796-AJW	OS/VS
2.13	VSAM Catalog List (DOS/VS)	5796-ALQ	DOS/VS
2.13	VSAM Catalog List (OS/VS)	5796-ALR	OS/VS
2.33	VSAMZAP	5796-PKG	DOS/VS
2.33	VSAMZAP	5796-PJQ	OS/VS1, OS/VS2
2.35	VSE Performance Tool	5796-PLQ	DOS/VS, DOS/VSE
2.4	VSPC Library Print Program	5785-EAA	MVS, VSPC
2.23	Wideband Communications Program	5796-PDJ	OS/VS
2.19	2260 Compatibility for CICS/VS using VTAM/TCAM	5796-ATW	OS/VS
2.7	2560 - Sort/Merge	5796-AGX	DOS/VS
2.6	2927 - Dual Printer Utility Program	5796-AFK	8K BPS Tape
2.18	3270 Emulator for 3600	5796-ARL	DOS/VS, VS1, VS2
2.7	3270 - Full Screen Support	5796-AGH	OS, OS/VS2
2.19	3270 Full Screen Support for COBOL/TSO	5796-ATK	MVS
2.5	3270 - Screen Image Preprocessor for IMS & IMS/VS	5796-AFC	OS, OS/VS
2.7	3525 - General Purpose Utilities	5796-AGE	DOS/VS
2.17	3600 - Bank Teller Application Program	5796-ARD	DOS/VSE
2.20	3600 Statistics & Message Log	5796-AWB	CICS/DOS/VS
2.19	3600 (PC) Transaction Documenter and Cross Reference	5796-ATR	DOS/VS, OS/VS
2.2	3650 Store Produced Actg Rpt Custzer (SPARC)	5788-CHA	
2.26	3661 File Creation Program	5796-PFZ	DOS/VS, OS/VS
2.17	3741 Report Generator	5796-ARC	--
2.20	3760 Automated DOS/VS Job Sub.	5796-AWA	DOS/VS
2.13	3760 - Dynamic BTP Generator System	5796-ANF	OS/VS
2.20	3790 Basic Key to Disk System	5796-AWF	3790
2.17	3800 - High Volume Printing	5796-ARA	OS/VS
2.18	3800 - 90-Degree Print	5796-ARE	OS/VS
2.20	3800 Page Formatting Service	5796-AWE	OS/VS
2.20	3800 System Design and Documentation Aid	5796-ATY	OS/VS
2.21	3800 Cartridge Off-Site Storage	5796-AWZ	OS/VS

IBM IBM Canada Ltd.   INSTALLED USER PROGRAMS

FILE LIMITING AUTO SPACE HANDLER
FLASH, IBM
5788 - CAA

A common method of maximizing throughput is to run several programs concurrently in the computer. This technique is known as multiprogramming. With the announcement of DOS/VS many enhancements have been made to disk operating systems to allow for increased levels of multiprogramming. A relocating loader makes it possible for programs to run in any partition. Multiprogramming capability has been increased to five partitions. With the advent of POWER/VS, class scheduling was introduced to the DOS/VS user. It now has become important that the jobs to be run be "partition independent", that is, capable of running in any partition into which they might be scheduled.

A major problem in achieving partition independence is the allocation of temporary disk files. In a DOS/VS environment, such a file is typically assigned in a fixed location by specifying the starting track number. Using multiprogramming, two programs may attempt to use the same disk space concurrently.

FLASH avoids this problem by providing dynamic workspace allocation. The user does not need to specify the starting track location for these files. Instead, FLASH assigns the starting track location based on a table that is maintained internally for each partition. Thus, the same job running in two different partitions can be assigned temporary disk file space in different areas of the same disk, or on separate disk volumes. Furthermore, by regenerating the FLASH program, work spaces can be altered without affecting existing job control statements.

FLASH aids in achieving true partition independent operation by dynamically allocating disk or space at execution time.

Marketing Support: Canadian Availability Notice G309-0091 ... PDOM SB10-6506.

HEALTH CARE SUPPORT (HCS) DL/1
OS Canadian Registration System
5788 - CDA

This CIP augments IBM Canada's Health Care Support offerings by providing a patient registration system uniquely tailored to the Canadian environment. It is based upon the BCS Patient Registration FPDs and enhance their function.

Like its predecessors, it established the patient database as the foundation for the HCS offerings. Tailoring for the Canadian environment has been accomplished through changes in the data base design, screen formats and application programming.

Highlights

- Wherever possible, Canadian terminology has been used in screen formats, edit tables and documentation (e.g., provinces, postal codes, etc.).

- The Canadian Social Insurance Number (SIN) has been added to the Registration screen and it is edited for a correct check digit upon entry.

- The basic patient segment and Registration screen accommodate a Provincial Health Insurance Number and two user-defined supplementary codes to further define types of health insurance.

- A general facility to transmit reports to an online printer that have been prepared offline is a new function that has been added.

- Two new batch programs are supplied, one ot produce a daily audit list of newly registered patients in a format suitable for transmission to an online printer and the other to produce complete patient listings from the total patient data base in name and medical record number sequence.

- The OS Canadian Registration CIP is distributed intact, eliminating the need for a customer to install the DOS product first as was the case with the original FDP's.

Marketing Support: U.S. Availability Notice G309-0209, ... PDOM SB09-0429, Health Care Support/Data Base Installation Guides SB21-1585 and SBO9-0428.

HEALTH CARE SUPPORT
(HCS)/DL/1-DOS CANADIAN ADMISSIONS SYSTEM
5788 - CGA

The DOS/VS version of HCS/DL/1 Canadian Admissions is now available. The function provided by this product is identical to that provided by HCS/DL/1-OS Canadian Admissions (5788-CFA).

With this announcement, IBM Canada Ltd, complements its HCS/DL/1 Canadian offerings by making deliverable application code available in the OS and DOS environments for the two most logical areas of a hospital to begin implementing a data based information system, namely Medical Records and Admissions. Highlights include Canadianized screen formats and new batch reports.

DOS Canadian Admissions 5788-CGA

Availability Notice GB09-0438, PDOM SB09-0440, HCS Data Base Installation Guide Canadian Admissions Update SB09-0435 (SB21-1585 and SB09-0428 are prerequisite publications).

HEALTH CARE SUPPORT (HCS)/DL/1
OS CANADIAN ADMISSIONS SYSTEM
5788 - CFA

This Country Implemented Program (CIP) is another in the HCS/DL/1 series of programs designed to assist a hospital in implementing a data base-oriented information system utilizing IBM's Standard Product Line. The two most logical areas to support when beginning to implement such a system are Medical Records and Admissions. Now, OS Canadian Registration and OS Canadian Admissions are the vehicles that, with minimal development effort, provide this support for a Canadian hospital.

Highlights

The Canadian Admissions system provides the following basic functions:

- preadmissions, admissions (including newborns), discharges, and transfers (including bed exchanges)
- hospital census reporting
- patient and bed inquiry
- patient data collection, inquiry, and update
- operation under CICS/OS/VS and IMS/VS-DB
- programs written in ANS COBOL/VS

In addition to the functions provided by the HCS/DL/1 Admissions FDP, the following enhancements have been incorporated in this CIP implemented through modifications to the data base design, screen formats, and application programs:

1. Wherever possible, Canadian terminology has been used in screen formats, edit tables, and documentation (e.g., provinces, postal codes, etc.).

2. The Admissions screen which gathers insurance information has been modified to handle information pertinent to provincial insurance policies.

3. The discharge screen has been reformatted to improve its readability for discharging patients from a clinic.

4. A new facility has been added to produce a list of patients for a specific doctor on an online printer. These reports may be used by doctors to assist in the location of their patients.

5. A new batch program to produce a daily list of admissions, transfers, and discharges is supplied. These categories are further sub-divided by patient-case type (e.g., Inpatient, Outpatient, or Emergency Patient.) Frequency of preparation of this report is optional.

6. A new online batch program is supplied that produces a complete census report of beds, indicating whether or not, and by whom, they are occupied.

7. A new batch facility to produce an alphabetically sequenced list of all inpatients has been provided.

Availability notice GB09-0434, PDOM-SB09-0436, Health Care Support/Data Base Installation Guide - Admissions Update SB09 0435 (SB21-1585 and SB09-0428 are pre-requisite).

HEALTH CARE SUPPORT (HCS)
DL/I DOS CANADIAN REGISTRATION SYSTEM
5788 - CEA)

This CIP is THE SECOND OF IBM Canada's Health Care Support Canadian-tailored offerings. Like OS Canadian Registration, to which it is functionally equivalent, it is based upon the HCS Patient Registration FDPs and enhance their function.

Like its predecessors, it establishes the patient database as the foundation for the HCS offerings. Tailoring for the Canadian environment has been accomplished through changes in the database design, screen formats and application programming.

Highlights

- Wherever possible, Canadian terminology has been used in screen formats, edit tables and documentation (e.g., provinces, postal codes, etc.)

- The Canadian Social Insurance Number (SIN) has been added to the Registration screen and it is edited for a correct check digit upon entry.

- The basic patient segment and Registration screen accommodate a Provincial Health Insurance Number and two user-defined supplementary codes to further define types of health insurance.

- A general facility to transmit reports that have been prepared offline, to an online printer. This is a new function that has been added.

- Two new batch programs are supplied: one to produce a daily audit list of newly registered patients in a format suitable for transmission to an online printer, and the other to produce complete patient listings from the total patient data base in name and medical record number sequences.

Marketing Support: U.S. Availability Notice G309-0210, PDOM SB09-0364, Health Care Support/Data Base Installation Guides SB21-1585 and SB09-0428.

IBM 3650 STORE PRODUCED ACCOUNTING REPORT CUSTOMIZER (SPARC)
5788 - CHA

The IBM 3650 Store Product Accounting Report Customizer (SPARC) provides the 3650 user with a flexible facility for implementing in-store accounting applications on the 3651 Controller.

The SPARC system performs these major functions:

- Balances the sales figures to the till contents either by cashier or by register.

- Provides the ability to maintain a separate backroom office accounting for store deposits and cash floats.

- Summarizes sales and accounting figures for the entire store including the office figures.

- Tracks operator productivity figures and hours signed on. Provides sales audit figures by type of media.

- Allows the user to specify certain exception conditions in the transaction log and write these records to a selected exceptions file. A selected exceptions file is the basis for a user written exceptions reporting application, eliminating the need to reprocess the transaction log.

Highlights

Flexibility with Efficiency

- Covers a wide range of user requirements through user defined accounting fields, reports formats and calculation specifications.

- S/370 program generates customized 3650 controller code for efficient execution at the store level.

- All programs highly structured using the 3650 SPPS program structure macros.

User Defined Accounting Fields

- Up to 70 accounting fields for each operator or terminal.

- 70 separate fields for store office use.

- Current, cumulative, and previous week totals maintained.

User Defined Traction Log Processing

- Selection of only those records and fields relevant to the user.

- Testing for prerequisite conditions such as void transactions, office terminal and up to 5 user specified conditions per record.

- Add and subtract amounts, maintain frequency counters, exit to a user routine for special processing.

- Handles 7481 Transaction Log.

User Defined Reports

- Up to 9 different reports by cashier for register, the store office, composite of all cashiers, or a combination of the latter two).

- 5 levels of subtotal and totals updating at report time (add, subtract, reset).

- Conditional and unconditional line suppression.

- Output on 3653 Point of Sale Terminal.

Selective Reporting Facilities

- Call for reports individually or in total optional.

- On-Line adjustment capability for selected accounting fields - this aids in making corrections and re-running corrected reprints.

Facilitates Other User Programming

- User exists which allow special processing, e.g., update flash items or department totals files with void transaction and data logger transactions.

- User specified conditions for selecting transaction log records to a selected exceptions file (together with logically related data). Eliminates the need to reprocess entire transactions log when developing other applications.

SPARC Host programs are written in DOS/VS COBOL and the Controller programs are written in 3650 SPPS Assembler.

The following programming systems are required:

- DOS/VS Operating System (release 33)

- DOS/VS COBOL Compiler and Library (Program No. 5746-CB1)

- Sort (Program No. 5746-SM1 or 5746-SM2)

- Retail Store System (release 3.0 or 3.1)

System Considerations

The host programs of the SPARC System will run on the following minimum configuration:

- S/370 Model 115

- 128K bytes of storage

- 3330 disk storage

- card reader

- printer

The largest conversational program on the 3650 Controller requires a minimum of 15 pages of real storage and a maximum if program is resident including working storage.

The largest background program is dependent on user specifications but will range from 44 to 76 pages maximum. It will run efficiently in from 20 to 40 pages of real storage.

Program Services

Central Service will be provided through June 30, 1978.

Documentation concerning errors in a licensed program may be submitted to:

IBM Canada Limited

Montreal Manufacturing and Distribution

5 Place Ville Marie

Montreal, Quebec, Canada

Attention: SPARC Co-ordinator

During this period only, IBM, through the program author(s), will, without additional charge send corrections to the customer reporting the problem and/or issue, through the Canadian Program Library (CPL), corrected code or notice of availability of corrected code. However, IBM does not guarantee service results or represent of

warrant that all errors will be corrected. Any on-site program service or assistance will be provided at a charge.

Marketing Support: Licensed Documentation: LBO9-0433 ... Unlicensed Documentation: SB09-0432 ... General Documentation: G309-0211.

PC/3600 TRANSACTION DOCUMENTER AND CROSS REFERENCE
5796 - ATR

This IUP provides two reports which assist in the development, operation, and maintenance of application programs created with the Program Customizer for 3600 (DOS/VS and OS/VS).

Notice G320-6077 and PDOM SH20-2110

IMS/VS MESSAGE REQUEUER
5796 - ATP

This IUP permits an installation to reinsert input and output messages back into an IMS/VS system from IMS/VS log tapes after IMS/VS has normally or abnormally terminated. The messages are reinserted with their original timestamp and are inserted in original time sequence. An audit trail is produced which records messages that could not be reinserted because of changes in the IMS/VS environment such as the elimination of transaction codes or logical terminal names. The IUP is designed to be used:

- To carry all or selected messages remaining in message queues across the cold start required by an IMS/VS system redefinition.

- To recover messages if IMS/VS emergency restart or normal warm restart fails, requiring a cold start.

- To reprocess selected transactions (up to 100 codes) previously processed by an erroneous aplication program.

- To stress test or regression test an IMS/VS system.

Notice G320-6071 and PDOM SH20-2106.

3270 FULL SCREEN SUPPORT FOR COBOL USING TSO UNIVERSITY OF NOTRE DAME
5796 - ATK

This IUP provides the COBOL programmer with the ability to utilize the facilities of the 3270 under TSO without being concerned with the details of formatting the screen. The IUP is invoked with five easily coded CALL statements and uses the COBOL WORKING-STORAGE SECTION to specify parameter lists. Functions supported include:

- Transmission of data to and from the screen

- Modification of attributes and contents of fields to a screen previously sent

- Refreshing a screen used repetitively to prevent retransmission of the entire screen.

The IUP uses either TSO TCAM or TSO VTAM and supports the 3277 Display Station as well as the large screen 3276 and 3278 Display Stations.

Notice G320-6067 and PDOM SH20-2103.

VM/370 SPOOLING SUPPORT FOR LOCAL 328X PRINTERS
5796 - PKZ

This IUP provides VM/370 users with the ability to spool and print CMS files on a local 3284, 3286, 3287, 3288, or 3289 hardcopy printer. Currently, users must print their files on the system printer or use the PF key to copy the screen image to a local hardcopy printer.

This IUP supports the Data Analysis - APL feature and the Vertical Forms Control feature of the 328X printers. All of the current 3272 or 3274 buffer sizes are supported.

Notice G320-6073 and PDOM SH20-2079.

EMERGENCY LOG TERMINATOR
5796 - ATN

This IUP is to be used when an IMS/VS system log tape cannot be otherwise closed through normal programs and procedures. This typically occurs following a catastrophic failure such as a power failure.

Expeditious closing of the IMS/VS system log tape is required to attempt IMS/VS emergency restart as soon as possible after a system failure. This is frequently successfully done by the existing IMS/VS System Log Termination Utility Program (DFSIFLOTO). When DFSIFLOTO is not successful, such as when the system dump is not available due to a power failure, the log must be closed in some other way before an emergency restart can be attempted. In both online and batch IMS/VS environments, the properly closed log is also needed to effect data base recovery. To insure the integrity this requires use of the IMS write ahead log facility is a prerequisite for this IUP.

Notice G320-6070 and PDOM SH20-2105.

MCGILL UNIVERSITY SYSTEM FOR INTERACTIVE COMPUTING (MUSIC IV)
MCGILL UNIVERSITY, MONTREAL, CANADA
5796 - ATL

MUSIC IV is an interactive operating system complete with a collection of utilities, compiler interfaces, and application packages. The collective goal is to provide a high performance, cost-effective and manageable time sharing environment. Concurrently, users may be performing such diverse activities as problem solving, program development, file editing, word processing, computer-assisted instruction, and batch processing. Flexible hardware requirements enable its use over an impressive spectrum of IBM computers - from the System/370 mdl 115 to the powerful 303X processor. It operates in both the VM/370 and dedicated machine environments.

Notice G320-6068, General Information Manual G320-1238, PDOM SH20-1103, User's Guide SH20-1104, and Script User's Manual SH20-1658.

ACF/VTAM AND NOSP DEFINITION AID
5796 - PKY

This IUP assists the ACF/VTAM Multi-System Networking Feature (MSNF) user in defining and maintaining the network. The program generates the resource definitions required in multihost communication. Additionally, it generates some of the definitions for the Network Operation Support Program (NOSP). These facilities improve the efficiency of the system programmer in the initial definition and in making updates to the network.

Notice G320-6069 and PDOM SH20-2104.

QUERY-BY-EXAMPLE FOR VM/370 CMS
5796 - PKT

This IUP is a high-level, interactive language facility which provides easy access to data by end users not necessarily skilled in data processing techniques. It features a unique, two-dimensional, user interface which is simple to use yet powerful and flexible. It can be easily learned in a few hours.

Query-By-Example (QBE) provides a powerful facility for answering complex queries which can be expressed by the end user in familiar terminology and logic.

Operations which can be performed during an interactive session with QBE include retrieval, insertion, deletion, update, and creation of data in the form of tables. These operations may be performed on entire tables, entire rows, entire columns or on one or more individual data elements.

Notice G320-6062, PDOM SH20-2077 and Terminal User's Guide SH20-2078.

MAINTENANCE, ENGINEERING AND STORE SYSTEMS IUPS
NORTH CENTRAL AIRLINES, MINNEAPOLIS

The following IUPs (5 modules) together constitute a maintenance system developed by North Central Airlines. They are IMS/VS based and offer a multi-industry solution to problems related to control of maintenance, preventive maintenance, inventory control, and scheduling of capital investments.

PROBLEM/CORRECTION REPORTING
5796 - ARP

This IUP is the first of five modules. It permits the entering of each maintenance problem that is related to each major unit of equipment. The system offers the capability to display any or all outstanding problems on any major piece of equipment at any time. This information enhances maintenance scheduling and results in increased productivity of maintenance personnel. Once the maintenance item has been performed, the corrective action is entered into the system to close the problem. Corrective action is tied to the respective problem closed.

Notice G320-6055, PDOM SH20-2074, User's Guide SH20-2075, and Systems Guide LY20-2359.

CATALOG INQUIRY/PARTS ORDERING
5796 - ARQ

This IUP is the second of five modules. It is designed to help the user determine the company's unique part number (up to 10 digits) when requesting a part from the stockroom. Most parts of equipment carry a manufacturer's part number (15-20 or more digits). By keying in this number, the system cross-references to the unique company part number and displays the full description of the respective part. If neither the unique company part number or the manufacturer's part number is known, the system provides the user the ability to enter the keyword of the part (i.e., tire, valve, pump, etc.). The system would display those parts that have a similar keyword. The display includes the full keyword, part description, manufacturer's part number, and the company's unique part number. From the list displayed, the user utilizes the light-pen to select the part required.

Notice, PDOM, and User's Guide (see above) ... System Guide LY20-2360.

COMPONENT MAINTENANCE
5796 - ARR

This IUP is the third of five modules. It maintains parts removal, parts installed, and maintenance accomplished for individual units of equipment. The history of these actions is maintained by this module.

Notice, PDOM, and User's Guide (see above) ... Systems Guide LY20-2361.

TIME ON PARTS/FORECASTING
5796 - ARW

This IUP is the fourth of five modules. It enhances the maintenance system's capability to forecast maintenance dates for each unit of equipment. The time a unit of equipment is utilized is put into the system on a period basis. The frequency of reporting *times* to the system would vary as related to the type of equipment being monitored. (The term *times* may mean different things to different parts.)

Notice PDOM, and User's Guide (see above) ... Systems Guide LY20-2362.

RELIABILITY
5796 - ARX

This IUP is the last of the five modules. It produces user requested reports for removal frequency and history for any type of part. These reports permit reliability analysis of a part's performance to be accomplished from chronological facts over time.

Notice, PDOM and User's Guide (see above) ... Systems Guide LY20-2363

IMS-APL DATA LINK FOR TSO
5796 - PKW

This IUP was developed to satisfy the need to link a personal computing facility (APL) with a user's IMS data base system. This link allows an APL user to submit IMS transactions to one or several IMS systems from an APL workspace; the output can be returned to the workspace for display or further minipulation.

The APL user has access to IMS DL/I data base through the intelligent remote station support (IRSS) feature of IMS, thus maintaining data base integrity and synchronization with IMS recovery and restart procedures. The link accepts any size IMS transactions from multiple APL users and handles single or multi-segment output from IMS.

The link uses a nonswitched point-to-point line for communication to IMS, providing the flexibility of either inter (multiple) CPU or intra (single)CPU operations. Data exchange between the APL user and the link is accomplished via shared variables.

Implementation of this IUP can significantly enhance both managerial and operational decision making processes resulting from the extraction of IMS data and subsequent data analysis and manipulation.

Notice G320-6065, PDOM SH20-2101 and Systems Guide LY20-2369.

VSPC LIBRARY PRINT PROGRAM
5785 - EAA

This IUP provides the VSPC chief administrator with an easy aid to list all enrolled users and their profiles, and to list all file profiles currently in the VSPC library. These are read from either the VSPC directory (SYSLDIR) on disk or a backup tape created by the VSPC service program.

Output consists of four reports:

- List of users and their profile attributes

- List of users' files and their attributes

- List of users' accumulated accounting information

- List of system, foreground processor, and auxiliary processor profiles

Notice G320-5816 and PDOM SH20-2050.

PL/I FOR VSPC (VSPC PL/I)
5785 - EAB

This IUP is a proper subset of the PL/I language, compatible at source level with the OS PL/I Optimizing Compiler, Release 3.0, and provides facilities appropriate for the VSPC interactive environment. It is a single-load, re-enterable module, and runs as a foreground processor

under VSPC in an OS/VS1 or OS/VS2 (MVS) operating environment. VSPC PL/I provides a very powerful programming language designed with performance and ease-of-use as important considerations.

Notice G320-5806, Language Reference Manual SH20-2031, Terminal User's Guide SH20-2030, Installation Reference Guide SB20-2032, and Systems Guide LY20-2312.

PROJECT EVALUATION AND CONTROL SYSTEM
5785 - EAE

This IUP is designed to plan, track, and control projects with typical manning levels between 3 and 15 people. It is especially suited to DP development projects. The IUP offering consists of an integrated set of forms, procedures, and APL functions to establish the personnel resources required to produce a system or product and track the performance of project members in meeting the product schedule.

Notice G320-6088, PDOM SH20-2123, and Systems Guide LY20-2375.

APL CONTINUOUS SYSTEM MODELING PROGRAM
(APL/CSMP) FOR VSAPL
5785 - KAE

This IUP consists of a set of interactive APL functions that enables the user to define and execute digital computer modules of continuous systems. These models are sets of mathematical equations which may contain predefined mathematical functions and special operation blocks supplied by APL-CSMP. Facilities allowing definition and change of parametric data and conditions, error bounds for computations, selection of the integration method, and control of the display of the results produced by the simulation run can also be included within the model.

The source language has a syntax very similar to that of the CSMP-III program product 5734-XS9.

Notice G320-6081, PDOM SH20-2115, and Quick Reference Guide GX20-2335.

PROBLEMS DETERMINATION FOR MVS OPERATORS
5785 - LAC

This IUP is a course that operates with the Interactive Instructional System (5748-XX6). It provides computer-based training for MVS console operators who work with an IBM System/370 Model 158 or 168. The course teaches operators how to diagnose the functional status of their central system, interpret messages issued by their system, initiate actions to prevent system interruption, and compile documentation of occurrence of system problems. Divided into two parts (System/370) Principles of Operation and Problem Determination), this course also stresses the use of documentation by operators in determining problems.

Notice G320-6099, PDOM SH20-2167, and Student Text SH20-2168.

FILM LIBRARY MANAGEMENT SYSTEM (FLMS)
5796 - ACW

This IUP from the University of Iowa provides film libraries with a comprehensive management system, maintaining customer records and film libraries, processing the booking and distribution of films, maintaining usage and request histories, and producing all the needed printed output, including confirmation notices, shipping labels, and billing invoices. Online data entry and inquiry is provided by 3270 display terminals.

Notice G320-1439, PDOM SH20-1316, and Systems Guide LY20-0779.

FREIGHT BILL AUDIT AND RATING SYSTEM
5796 - AEJ

The Freight Bill Audit & Rating System from the Goodyear Tire and Rubber Company, Akron, Ohio, is a unique traffic system that permits computer generated computation of the lowest charge for most truck and rail shipments of one or more (straight or mixed) commodities from any origin to any destination for which the data base has been created. The system also features computer audit (reconciliation) of most carrier freight bills prior to payment. Programs are provided which may be used to create and maintain an extensive data base of the shipper's traffic pattern.

Notice G320-8071, PDOM SH20-1343, Systems Guide LY20-0925, and Users Guide LY20-0938. Marketing Guide ZZ20-3467.

COMPUTER GENERATED CORRESPONDENCE
5796 - AER

This IUP from Fidelity Union Life Insurance, Dallas, Texas, allows letters to be requested in two ways: on demand through a 3270 visual display terminal or automatically from CFO daily cycle, agency and payroll systems. Pre-composed letters are stored on a DASD. Existing data bases are accessed to provide information such as policy number, name, address, etc., while variable data is entered when the letter is requested. The online and batch letter requests are combined, sorted by letter type and printed. During the print run, the pre-composed letter is extracted from the letter file and the variable information is inserted at its proper place. Usage statistics are maintained by letter type. To optimize DASD utilization and to avoid data duplication, all words in the pre-composed letter file are maintained as codes which point to word dictionaries. The facility exists to generate multiple copies of the same letter and also to prepare envelopes.

Notice G320-8094 and PDOM SH20-1365.

MEDICAL RECORD ABSTRACT SYSTEM
5796 - AFA

This IUP from the West Jefferson General Hospital, Marrero, LA, fulfills the minimum standards of the Uniform Hospital Abstract: Minimum Basic Data Set. Data is collected for inpatient discharges and outpatient visits. Online file updating is provided via 3270s located in the Medical Records Department. Monthly and yearly discharge statistical reports are produced offline.

The Medical Record Abstract System is written in ANS COBOL and consists of teleprocessing and batch application programs. The programs execute under the control of the Customer Information Control System (either CICS/DOS-Entry 5736-XX6 or CICS/DOS-STANDARD 5736-XX7 or CICS/DOS/VS 5746-XX3) program product in a DOS or DOS/VS environment.

Notice G320-8101 and PDOM SH20-1392. Marketing Guide ZZ20-3643.

PRODUCTIVITY AID:
3270 SCREEN IMAGE PREPROCESSOR FOR IMS AND IMS/VS
5796 - AFC

This IUP from the INA Corporation simplifies the design and implementation of IMS/3270 applications. Each 3270 screen format added to an IMS system necessitates the preparation of many detailed control statements as input to the Message Format Language Utility. Using a single control statement and only one card image for each line to be represented on screen, the Preprocessor generates the required IMS input statements. Each line of the screen image is coded exactly as it is to appear on the 3270 screen. Field control information (attribute bytes), which do not appear on the actual screen but occupy one screen character position at the beginning of each field, must also be coded to specify the desired field types. The Preprocessor output includes a printed representation of the screen layout in addition to generated control statements which may be printed or passed to the utility.

Notice G320-8099, PDOM SH20-1390, and Systems Guide LY20-0946.

2927 DUAL PRINTER UTILITY PROGRAM
5796 - AFK

This IUP from the R. H. Donnelley Corporation supports two 1403 Printers Model N1 connected to the 2927 Tape-to-Printer RPQ. The RPQ with this IUP provides for high volume production printing for direct mail addressing, labeling, letter writing and premium notice printing at low cost. Each printer is operated independently of the other. Tapes are prepared in previous operations in the desired format. Two volumes of a multi-volume file or two separate jobs operate simultaneously. This program will not run on the 2927 single printer model. FDP 5798-AKH provides comparable support for the single printer model.

Notice G320-8106 and PDOM SH20-1544.

IMS ONLINE DEMAND DEPOSIT ACCOUNTING SYSTEM
5796 - AFN

This IUP from the Bank of Delaware, Wilmington, DE, is a high function system which provides for account profitability analysis, online inquiry and updating, comprehensive report request facilities, and one-pass processing of the data base for posting, statements, and standard reports. It includes nearly 100 transactions for 3270 operators to perform; many functions associated with the Demand Deposit Accounting function online. The data base design is flexible for growth and maintenance. It makes full use of IMS and its security features. It is an excellent vehicle for moving the fundamental commercial banking application to an IMS base.

Notice G320-8119, PDOMs SH20-1603, SH20-1604, and SH20-1675, and Systems Guide LY20-7093.

SMF GRAPHICAL ANALYSIS PROGRAM
5796 - AFP

This IUP from the Peoples Gas Light and Coke Company, Chicago, Illinois, is designed to bridge the gap between detailed accounting data provided by OS or VS (VS2 with or without HASP) Systems Management Facility (SMF) and easy-to-read, summarized reports required by DP management. The IUP processes raw SMF Data and produces charts, tabular listings, reports and histograms, both detailed and summary. If your installation requires summarized graphs of system utilization, a job-step concurrence chart, sorted job-logs or job-step logs, a trail to help isolate performance problem areas, or a reformatted SMF data set to aid in the design of a DP billing or accounting system, then this IUP may be the solution.

Notice G320-8127 and PDOM SH20-1618.

RAIL CAR MANAGEMENT SYSTEM
5796 - AFR

This online IMS-based IUP from Hercules, Inc., Wilmington, Delaware, allows management to develop and maintain an extensive base of information on each rail car with respect to financial, tracking and maintenance records. Reports on out-of-service, excessive idle time, daily activity, etc., are provided as well as data base inquiry as to car status. Car location messages are used to update car spotting information.

This IUP is designed to help improve utilization of rail fleets. Savings may be achieved by reduction in the numbers of rail cars to provide a given level of service or by providing a greater level of service with the same number of rail cars.

Notice G320-8102, PDOM SH20-1548, and System Guide LY20-2056 and LY20-2071.

ONLINE PAYROLL AND PERSONNEL SYSTEM
5796 - AFX

This IUP from the First National Bank of Maryland, Baltimore, MD, provides a full range of personnel and payroll capabilities for a company with most of its employees residing in a single state. Weekly, biweekly, monthly and incentive payrolls can be handled. Inquiry, data entry, and update are done through 3270 terminals - one terminal belonging to the Personnel Department and one belonging to the Payroll Department. Batch data entry and recovery programs are also included.

Data security and auditability is controlled by an identification number to access the system. For sensitive accounts, the code is changed daily by the system.

The system is written in ANS COBOL and runs under CICS/DOS/VS. The minimum processing unit for CICS/DOS/VS is a System/370 Model 115 with 96K bytes of real storage. For this IUP, two 3275 or 3277 display devices are required.

Notice G320-8126, PDOMs SH20-1612 and SH20-1613, and Systems Guide LY20-2098.

CONVERSION AID:
DOS TO OS CONVERSION SYSTEM
FOR JCL, COBOL, RPG, AND SORT/MERGE
5796 - AFZ

This IUP from Envirotech, Salt Lake City, Utah, automates the conversion process for JCL, COBOL, RPG, SORT and some utility programs.

DOS JCL and DOS programs are displayed side by side with their OS equivalents. The OS equivalents are punched with JCL ready for compilation and catalogueing for testing. COBOL D programs are processed by the Language Conversion Program to bring them to the ANS COBOL level before conversion. COBOL programs with end-of-page indicators are modified for handling of the carriage control tape. All CALL subroutines are identified for further resolution. DOS RPG FILENAMES are converted to OS RPG DDNAMES through the use of cards provided during the conversion process. All SORT control cards are handled automatically. A management report is provided as part of the process which shows the status of the conversion on a dynamic basis.

The Envirotech Corporation converted 1,200 routines to OS/VS from four geographically separated divisions while consolidating their operations at Salt Lake City. They did this with one system programmer and three part-time clerical personnel in six months through the use of the Conversion System. They estimate that two-thirds of all time and effort were saved over manual alternatives.

Notice G320-8124 and PDOM SH20-1610.

PROOF OF DEPOSIT AND TRANSIT SYSTEM
5796 - AGA

This IUP from the Houston (Texas) National Bank features the complete proof of deposit function, online correction of rejects, automatic balancing by transaction, and nonstop reader/sorter processing with divider slips for bundle totals.

The system also features use of destination headers for *killing* a high number of endpoints in two passes, automatic cash letters, multiple copy recaps, endpoint analysis, and sort pattern maintenance by user (Item Processing Department).

Major advantages include improved disposition of rejects, more accurate float, sort pattern changes controlled by Item Processing Department and audit trail of all items corrected.

For enhancements, see 5796-AKT and 5796-AKW (3890 Feature).

Notice G320-8118 and PDOM SH20-1605.

COMMERCIAL LOAN ACCOUNTING SYSTEM
5796 - AGB

This IUP from the Commercial National Bank, Kansas City, Kansas, is for batch and CICS/VS online operations of a commercial bank loan portfolio.

The system performs all basic accounting functions, interest calculation and daily accrual posting, maturity and past-due notices, customer obligation summary reports, participation servicing, and information for evaluating the total portfolio. It provides an interface to the DOS Customer Information File FDP 5798-AHX.

Notice G320-8113, PDOMs SH20-1614 and SH20-1615, and Systems Guide LY20-2099.

3525 GENERAL PURPOSE UTILITIES
5796 - AGE

This IUP from Parkview Markets, Cincinnati, Ohio, takes advantage of the capabilities of the 3525 Card Punch which when equipped with special features can read and/or print as well as punch 80-column cards in a single pass. The major functions include interpret, print any data on any card, ledger update, reproduce, gangpunch, and resequence.

Notice G320-8111 and PDOM SH20-1564.

FULL SCREEN 3270 SUPPORT FOR PL/I
AND ASSEMBLER APPLICATION PROGRAMS UNDER TSO
5796 - AGH

This IUP from Texas A & I University is a multifunction and multipurpose subroutine that provides an interface between the IBM 3270 Information Display System and PL/I or Assembler programs running under TSO. The IUP provides convenient, meaningful access to all the features of the IBM 3270 and isolates the programmer from the many intricacies of the device while still allowing complete control over every aspect of the terminal. Coupled with TSO, Full Screen 3270 Support for PL/I and Assembler Application Programs under TSO allows true interaction between a running program and a user at an IBM 3270 display terminal.

The IUP includes many features designed to speed program development. One of these is comprehensive error checking. Error messages are displayed at the terminal and associated with the erroneous CALL statement by offset from an entry point name, just as in normal PL/I error messages. A trace facility, which can be dynamically controlled, allows step-by-step examination of the results of each call to the program and indicates to the user at the terminal the command name and the offset and entry point name corresponding to the CALL statement. For assembler users, the macros provided with the IUP automatically generate the appropriate parameters and parameter list for calling the program and use essentially the same notation as used by PL/I users.

Notice G320-8114, PDOM SH20-1569, and Systems Guide LY20-2090.

INSTALLMENT LOAN CALCULATOR
5796 - AGQ (CICS/DOS/VS)
5796 - AGR (CICS/OS/VS)

This IUP is for online use by credit officers of banks and retail enterprises when making installment loans.

It supplants the use of rate books for fitting payments and percentages to satisfy loan requests. It allows the credit CICS for both DOS and OS with 3270 and/or 7770 audio response. It allows the credit officer to spend more time with the customer and develop an installment loan more closely related to the customer's wishes. The potential advantages are increased loan business due to more flexible terms, increased yield by inclusion of odd-day interest, reduction of errors by elimination of manual calculations and the replacement of expensive rate books and programmable calculators. It operates under CICS for both DOS and OS with 3270 and/or 7770 audio response system if desired.

Notice G320-8121, PDOM SH20-1607, and Systems Guide LY20-2095.

ONLINE LIST MAINTENANCE SYSTEM
5796 - AGT

This IUP from the Lutheran Church in America, Philadelphia, PA, can help reduce the time-consuming, tedious clerical work of maintaining records of subscribers to various periodicals.

This online system establishes a record and match code for each

subscriber. An order for an additional publication only requires a segment to be appended to the previously created record. The system guides the operator through the process of data entry and error correction. It requires MTCS/370, a Field Developed Program (5798-ALN), and the facilities of VSAM (5745-SC-VSM).

The online transactions supported are: browsing, add records/segments, change records/ segments and drop records/ segments. Some examples of system output are labels (in zip code sequence), ABC report, Zone Analysis Summary, and reports by class and type of subscription.

Notice G320-8117, PDOM SH20-1602, and Systems Guide LY20-2092.

2560 SORT/MERGE FOR DOS
5796 - AGX

This IUP allows the user to sort a card file on the 2560 into either ascending or descending sequence on the basis of alphameric or numeric control data in one to five fields.

Release Notice G320-8137 and PDOM SH20-1623.

GENERAL PURPOSE TAPE AND DISK SCANS
5796 - AGY

This IUP provides the capability to decrease both programmer and computer time required to test new applications, debug existing errors, and create special reports for management. The two general purpose file scans handle fixed, variable, and undefined record formats on disk or tape, and search up to 14 fields for high, low, equal, not high, not low, and not equal conditions.

Notice G320-8166 and PDOM SH20-1625.

PERSONAL TRUST SYSTEM
5796 - AHH

This IUP from the National Central Bank, Lancaster, PA, includes online and batch programs designed to provide online inquiry into trust files and online data entry of monetary and maintenance activity via 3270 Model 2s. Batch functions provide extensive editing and control of monetary and file maintenance activity entering the system. The posting and reporting sub-systems provide daily, weekly, monthly, and other cyclic reporting necessary for day-to-day operations of the Trust Department. Many reports are automatically produced by the system, while others are produced upon specific request of the user department. The statements sub-system provides 3 optional statement formats cycled on monthly, quarterly, semi-annual, or annual reporting periods. The pricing sub-system utilizes CUSIP number and a pricing service tape to update stock and bond prices in the property master file. A common fund sub-system provides for maintenance of participant accounting in the several common funds maintained by the Trust Department. A temporary daily investment fund sub-system provides for short-term investment in a commercial paper pool with variable daily interest rates. A check writing sub-system provides for writing income checks to correspond with statement mailing as well as other checks prepared on a repetitive cycle with a static amount. Extensive computer generated descriptions and turnaround transactions can be produced by the system.

The IUP runs under CICS/DOS/VS (57465-XX3) and utilizes DOS/VS SORT/MERGE (5746-SM1) and DOS/VS COBOL (5746-CB1). The online data entry modules are written in BAL while inquiry and batch operations are written in COBOL. File services include SAM, DAM and ISAM.

Notice GB20-8139, PDOM SH20-1672, User's Guide SH20-1673, and Systems Guide LY20-2184.

PRODUCTIVITY AID:
CICS/VS ONLINE TEST/DEBUG II
5796 - AHJ

This extended support IUP provides the programmer with the facilities to test and debug application programs and files while CICS/VS is operating, by entering command statements via a 3270 Information Display System.

Key Function, Facilities, and Features

- Display any location in main memory of the machine

- Alter any location within the CICS/VS job step boundaries

- Stop the execution of a specific CICS/VS task at a specific address within an application program

- Display and alter storage records on any data set available to the CICS/VS job step

- Immediately change storage records on file (ISAM, BDAM, VSAM, DL/I, and temporary storage)

- Open or close files online

- Able to console debug programs without interrupting the normal operation of the installation.

- Provide the ability to make program changes without reassembling or relink-editing

- Enables forcing of transaction dumps

- Enables the programmer to set up data conditions on disk and set up main storage conditions for test

- Allows programmer to step through program one instruction at a time, displaying registers and data at each step.

Notice G320-5710 and PDOM SH20-1877.

PRODUCTIVITY AID:
IMS 3270 LOCAL COPY FOR ONLINE PRINTING
5796 - AHL

This IUP from Hamilton Standard provides for online printing of IMS 3270 screens on a locally attached 3284 or 3286 printer under operator control. It performs a function comparable to remote printing under IMS. It is application independent and can be used effectively in debugging new applications as well as providing hard copy for existing applications. It can help improve data security by permitting an installation to implement only local copy capabilities where tighter control can be maintained.

Notice G320-8150 and PDOM SH20-1721.

IMS LOGTAPE MANAGEMENT SYSTEM
5796 - AHT

This IUP is a set of four assembler written programs that manages information concerning LOGTAPES created by IMS/VS. The programs provide Logtape assignment and JCL for IMS/VS accumulation and recovery runs, and can be used for an installation's entire data base system or selected data bases.

Notice G320-8141 and PDOM SH20-1707.

INVESTMENT PORTFOLIO MANAGEMENT SYSTEM
5796 - AHW

This IUP from the Home Insurance Company, New York, NY, provides online computer-based capabilities for maintenance of and access to an online portfolio data base. This system is of interest to any corporation or organization with one or more investment portfolios to manage.

This system utilizes the Information Management System (IMS) and can provide online inquiry, data collection, validation and update facilities, reporting facilities and data storage for backup and for trend analysis, thus providing portfolio managers and analysts with online information to assist in portfolio management. It provides for cash flow forecasting through anticipated income reports and monitors portfolio distribution to facilitate compliance with regulatory requirements.

Finally, the system performs accounting functions associated with the investment process. It tracks activities of the portfolio (changes, trades, interest, dividends, adjustments), provides input to the General Ledger and other corporate accounting books, and produces statistical, management and statutory reports.

Notice G320-8144 and PDOM SH20-1712.

COBOL MAINTENANCE AID
5796 - AHY (DOS)
5796 - AHZ (OS)

This IUP from International Playtex reads a source module, analyzes the procedure division, and assigns an arbitrary number to paragraph names. These numbers are then displayed in a tree-structure showing the next level (referenced paragraph) and listing the previous level (referencing paragraph). The source code in the paragraph is also listed. The objective of the IUP is to provide logic documentation for source programs to aid in modification or error correction and to be used as a status report during development and design validation.

Marketing Support: Release Notice G320-8146, PDOM SH20-1716, and Systems Guide LY20-2196.

SVS/MVS SYSTEM AND JOB IMPACT ANALYSIS
5796 - AJF

This IUP from the United Banks Service Company, Denver, Colorado, is designed to assist customers in understanding the performance of an individual job within the OS/VS2 environment and its impact on the total system. This system can log the job related information provided by the operating system in the Task Control Block, Task Input/Output Table, Timer Control Table, and Page Frame Table. A series of three report programs can provide for the data reduction and presentation of the results. This series of programs can be used to help analyze such activities as communication user response, TSO performance, and the impact of background jobs on the total system.

This system consists of four programs: a logging program which can run concurrently with SVS or MVS and three report programs for reduction of the data into meaningful reports. The logging program can be installed without any system modification. The program can be initiated/terminated from the system console, allowing for variable sampling periods and sampling intervals.

Notice G320-8149, PDOM SH20-1720, and Systems Guide LY20-2217.

APPAREL BUSINESS SYSTEM/370
5796 - AJG

This IUP is designed to provide a complete comprehensive and integrated system for the apparel manufacturer, featuring interactive data entry, online inquiry, and batch reporting. It uses 3270 Information Display terminals, operating under CICS/VS, in user departments for all data entry, inquiry and update functions required.

The functions of the system include order entry and analysis ... inventory control and contractor work in process ... component inventory - raw material requirements ... style bill of material with standard costing ... order allocation with warehouse pick tickets invoicing ... credit memos and credit analysis ... (sales personnel) commissions ... open item accounts receivable, including online cash/credit application ... sales analysis.

Notice G320-8152 and Terminal Operator's Guide SH20-1560.

ONLINE LIST MAINTENANCE SYSTEM
5796 - AJH

This IUP from the Lutheran Church in America, Philadelphia, PA, is identical to IUP 5796-AGT, the version that runs under MTCS/370; however, it runs under CICS/DOS/VS (5746-XX3), and utilizes DOS/VS SORT/MERGE (5746-SM1) and the facilities of VSAM (5745-SC-VSM).

Notice G320-8117, PDOMs SH20-1765, SH20-1766, and SH20-1767, and Systems Guide LY20-2207.

PRODUCTIVITY AID:
DOS/VS GENERALIZED FILE MAINTENANCE SYSTEM
5796 - AJJ

This IUP from Demographics, Inc., Conway, Arkansas, provides control card operated standardized programs for file creation, file maintenance, and input editing. It works with SAM, ISAM and VSAM files. Data entry can be in free form or fixed form from any key driven device. Once the files are defined by control cards, data can be entered into the system for the creation of the file and subsequent maintenance. This can free the programmer to devote more time to the logic of the application programs. Demographics states that significant coding time has been saved in file maintenance programming throughout their organization.

Notice G320-8152 and PDOM SH20-1726.

TSO/MSS ARCHIVER
5796 - AJK

TSO users tend to need more and more space for storing their permanent data as time progresses. On the other hand, at any particular point in time, they are working with a relatively small subset of this data. In other words, the data falls into one of two categories: active or inactive. These categories may be thought of as hierarchies of storage: Level 1 (active) and Level 2 (inactive).

When specifying the media for storing these two hierarchies, a TSO user has traditionally used real DASD for both levels. Some have used tape for Level 2 but waiting for tapes to be retrieved and mounted is non-productive and costly. Furthermore, no systematic way of transferring data between the levels was supported by IBM.

The 3850 Mass Storage System has created an opportunity to significantly reduce the time needed to retrieve and mount tape data sets, and this IUP bridges the gap between TSO and the MSS by providing TSO users with a systematic way of keeping their inactive Level 2 data on MSS cartridges and retrieving that data from Level 2 with minimal delays. TSO users and their installation, therefore, benefit from the lower storage costs inherent in the 3850 MSS. The installation savings can help justify 3850 MSS.

This IUP:

- Supports the 3850 Mass Storage System.

- Reduces the cost of running TSO.
  Reduces the amount of real DASD space
  required for storage of permanent TSO data sets.
  Stores inactive data at low cost on 3850 MSS cartridges.
  Retrieves data from Level 2 without operator intervention.
  Copies changed data only during backup.

- Can improve TSO user productivity.
  Cuts time for retrieval of archived data
  from hours and minutes to seconds.

- Improves management control of TSO operations.
  Permanent data space can be allocated by the installation.
  Data compression reduces the space
  required to store archived data.

- Provides audit, data security and control features.
  Maintains an audit trail of changes.
  Maintains an installation specified number of copies of data.
  Makes use of VSAM password protection.
  Prevents concurrent updates by multiple users.

Notice G320-5746, PDOM SH20-1748, and Systems Guide LY20-2200.

PRODUCTIVITY AID:
IMS HDAM RANDOMIZER ALGORITHM ANALYZER
5796-AJL

This IUP from the INA Corporation is for IMS/360 and IMS/VS users to help them evaluate the effectiveness of their HDAM randomizing routines. An array of counts of synonyms developed for each Root Anchor Point is printed with additional information such as RAPs not used, counts of long chains, average long chain length and worst case long chain. Any number of randomizing routines can be evaluated in one session. Input can be from an existing OS file, an existing HISAM, HIDAM or HDAM file or a key file generated by the use of the DBPROTOTYPE IUP 5796-PBB. The INA Corp. uses the aid under batch and TSO control. The most significant benefit is the potential for improved transaction processing time achievable by moving from other access methods to HDAM. Additional benefits can come from fine tuning the HDAM randomizing routine and the possibility of avoiding data base reorganizations at a later time if the randomizing algorithm chosen is ineffective.

Notice G320-8157 and PDOM SH20-1756.

STATUTORY/GAAP VALUATION SYSTEM
5796 - AJR

This IUP from the Carlin Black Systems Corporation, Louisville, Kentucky, is designed to calculate statutory and GAAP reserves and premium items and details on policy values for year-end and interim valuation. The system also has the ability to process accident and health reserves, the ability to compute due, deferred and advance premiums on ninthly and tenthly modes, more comprehensive editing, audit trail provisions, and many additional reports not provided in '62 CFO valuation.

This product consists of 32 programs written in COBOL/VS. The programs fall into five basic categories: Valuation, Print, Maintenance/Conversion, Reserved Released, and Policy Exhibit. The Valuation category includes statutory and GAAP valuation for the following types of insurance: Life, Annuities, Accident & Health, Supplemental Benefits, Extra Life, and Paid-up.

Notice G320-5662 and PDOM SH20-1786. Marketing Guide ZZ20-3490.

PRODUCTIVITY AID:
DOS/VS PRESORT PROCESSOR
5796 - AJT

This IUP from Peter Eckrich and Sons, Inc., Fort Wayne, Indiana, is a special purpose utility program designed to aid in converting difficult offline card sorting operations to a DOS/VS disk sort. It would be particularly useful where diskette input media is being considered and offline sorting operations become impossible.

This program reads cards or card images from diskette, tape, or sequential disk and builds a sort key on the front of each record. The contents of the appended sort key are established by user-supplied control cards. The control cards indicate which fields will be used to build the sort key, what sequence to use in sorting, and what exceptions will apply. The exceptions can either be substitute values for sorting purposes, or transactions to be eliminated from the input.

A sort exit is provided with the IUP to remove the sort keys from the records in the final phase of sorting, thereby eliminating the need to modify the processing programs which will use the file.

Notice G320-8160 and PDOM SH20-1782.

VSAM ACCESS ROUTINES
5796 - AJW (OS/VS)
5796 - AJX (DOS/VS)

This IUP from Central Hudson Gas and Electric, Poughkeepsie, NY, is designed to provide easy access for full-function VSAM files through a variety of high level languages. A standard CALL interface (from COBOL, FORTRAN, Assembler) to perform VSAM requests simplifies the application programmer's job; a step-by-step installation procedure and sample program assists the first-time VSAM user by providing jobs for VSAM object definition and examples of access to key-sequence and alternate index data sets. Comprehensive error codes and messages can isolate user or system errors.

Notice G320-8161 and PDOMs SH20-7180 (OS/VS) and SH20-7181 (DOS/VS).

MEASUREMENT AND CONTROL HIERARCHICAL SYSTEM
5796 - AJY

This IUP from Stone Container, Coshocton, Ohio, is designed to implement a process control philosophy which is based on cost-effectiveness. Three distinct areas are addressed: 1) a standard plant interface for various types of control instrumentation, 2) an effective interface between a System/7 and a System/370, and 3) a simple interface between user-written process control programs and the process executor.

The IUP is designed to run in a combination process control and data processing environment utilizing a common data base. A maximum of 128 instruments can be monitored by this IUP. Up to 32 instruments can be controlled using a variety of algorithms. The 3270 terminals are used to display the status of the process including multiple process variables setpoints, current values and deviations.

The IUP can be maintained (modified) by data processing personnel with a minimum of process control expertise.

Notice G320-8140, PDOM SH20-1783 and Systems Guide LY20-2213. Marketing Guide ZZ20-3486.

INTERACTIVE APPLICATION SIMULATION MACROS
FOR THE INTERACTIVE TRAINING SYSTEM
5796 - AJZ

This IUP is a set of two macros (FILD and SUM). They provide for full screen 3270 field analysis of user-written application simulations under the Interactive Training System with the Course Structuring Feature. The special features that FILD and SUM provide include: all error messages appear on one screen, corrections can be made on the same screen with the error messages, through the use of keywords, data can be inserted on the original screen, and a new screen can be presented when the student does not meet criterion and has no more attempts left.

Notice G320-5655, PDOM SH20-1788, and Systems Guide LY20-2215.

DATA ENTRY CONTROL AND AUDIT SYSTEM
FOR DOS POWER/VS
5796 - AKC

This IUP from the First Greatway Corporation, Lincoln, Nebraska, provides data entry control for centres handling data which arrives randomly and from a number of sources. It supports 3740 diskettes and other media by permitting the intermix of media to create batches of data for further processing. Auditing reports of each transaction make possible a very rigid control of input for a wide range of jobs. The number of diskettes and other media required is significantly reduced because of the archival system included. The method of control includes appending a 16 byte control key to each data record during the transcription and control processing. The control key permits the accumulation of data for specific jobs from small batches for subsequent processing by application programs running under DOS with POWER/VS.

Notice G320-8155 and PDOM SH20-1803.

LIFE INQUIRY/DATA ENTRY ENHANCEMENT
5796 - AKD

This IUP consists of five modules which simplify the entering of eleven CFO transactions under the DOS versions of the Life Inquiry/Data Entry Program Product (5746-N11) using 3277 Display Stations. These modules allow the terminal operator to display the pertinent data contained in the master policy record and then enter only the desired changes as the screen containing the previously recorded data is displayed. In this way, two CFO transactions (add and delete) are generated by one entry (change) and only data that is altered needs to be entered.

Notice G320-5659 and PDOM SH20-1801.

PRODUCTIVITY AID:
DL/I DOS/VS HDAM REORGANIZATION UTILITY
5796 - AKF

This IUP from the General Reinsurance Company is designed to help provide more effective use of DL/I DOS/VS HDAM. It can be used to help predict and tune HDAM data base performance. It can also be used in system design and in maintenance of data base performance with a reorganization feature that permits optimum loading. The user supplies randomizing routines and DBDGEN performance parameters. From these, the IUP calculates the average number of I/Os required to access root segments randomly. It summarizes the synonym chain lengths and indicates the number of times each length occurs in a report. By varying the randomizing routine and running a series of alternatives, the user can pick the routine and parameters that will best suit his purposes. It can be used effectively in reorganizing HISAM, HIDAM or HDAM data bases to minimize disk activity and improve transaction throughput. Data integrity is preserved since DL/I files are only read.

Notice G320-5660 and PDOM SH20-1802.

CONVERSION AID:
OS/VS PL/I TO PL/I OPTIMIZER
5796 - AKG

This IUP aids in the conversion of PL/I F to PL/I Optimizer and Checkout Compiler level programs. It accepts input source code and the ATR/XREF output from the PL/I F compiler and produces source code that can be compiled under PL/I Optimizer and Checkout Compilers with limited additional work. It inserts %INCLUDE statements for a standard member where no ambiguity exists. References to PL/I F subroutines are replaced with PL/I Optimizer subroutine references. Explicit declarations are generated for implicitly or contextually declared variables. DDNAME references are deleted from %INCLUDE statements.

Marketing Support: Release Notice G320-5666 and PDOM SH20-1809.

VIDEO SUPPORT AIDS
5796 - AKK

This IUP consists of a series of batch and on-line programs which provides the VIDEO/370-CICS/DOS/VS user the following functions:

- Additional edit capabilities which can either reduce or eliminate the need for CICS/VS edit programming.

- Automatic generation of COBOL data definition statements in copy book format.

- Enhanced debug diagnostics which can shorten the time required for problem determination.

- Dynamic loading of VIDEO user edit routines thereby minimizing the effort required to add new and/or modified edit routines.

- Facilities to dynamically enable/disable both VIDEO formats and/or user edit processing.

- Enhanced ABEND recovery to provide greater VIDEO availability.

- Additional batch report capabilities.

- Simplified COBOL extract programming requirements.

Notice G320-5668 and PDOM SH20-1811.

CICS MESSAGE SWITCHING SYSTEM
5796 - AKN (DOS/VS)
5796 - AKP (OS/VS)

This IUP from the American Hoechst Corporation, Somersville, NJ, is a set of programs that provides a CICS/VS message processing system. The system permits the user via commands to send or receive any 3270 basic mapping screen format to or from any other user in the system.

Notice G320-5676 and PDOM SH20-1818.

AN INTRODUCTION TO THE METRIC SYSTEM
5796 - AKQ

This IUP from Montgomery Ward & Company is a Computer Based Training course designed to introduce individuals to the metric system and its background and to explain some of the rationale for metrification in the United States. Simple conversion problems are placed throughout the course; mathematical calculations are accomplished through the use of conversion charts and hand calculators or scratch paper. The average completion time is approximately 1 1/2 to 2 hours. Topics included are:

- Importance of knowing the metric system.
- Origins of the metric system.
- Usage of metric units.
- Effect of the metric system in one's company.

Notice G320-5683, PDOM SH20-1840, and Metric Reference Card GB21-9876.

COMBINED LOAN SYSTEM
5796 - AKR

This IUP from the Mercantile National Bank, Corpus Christi, Texas, is a comprehensive system for processing installment, commercial, and mortgage loans using DL/I ENTRY and CICS/VS for online data entry and inquiry with 3270 terminals.

When a loan applicant enters the bank, the receptionist takes the necessary information and prepares an account history for use by the loan officer, based on information provided by the Combined Loan System and printed online. The loan processing is followed continuously by the system insuring current status at all times. Included are reports for management such as the New Loan Report and Delinquent Report by officer. Loan types, dealer participation, past due and advance notices preparation, statements for paidouts, calls and renewals are also reported. File creation, file maintenance, MICR capture of note payments, and online re-entry of rejects are included. This IUP replaces 5796-AGG which uses VANDL/I.

Notice G320-5685 and PDOM SH20-1843.

PROOF OF DEPOSIT AND TRANSIT SYSTEM - ENHANCEMENTS
5796 - AKT

This IUP from the Houston (Texas) National Bank offers the following enhancements to the prerequisite Proof of Deposit and Transit System, IUP 5796-AGA:

- Master Capture List is printed after the All Items File is balanced.
- Capture/Item Number printed on cash letters makes research easier.
- All reports print columnar.
- Full field capture allows the maximum characters in each check to be captured.
- Usability enhancements make modification and installation easier.

Notice G320-5687 and PDOM SH20-1845.

PROOF OF DEPOSIT AND TRANSIT SYSTEM - 3890 FEATURE
5796 - AKW

This IUP from the Houston (Texas) National Bank allows one 3890 to run under CICS/DOS/VS. Microfilming, item numbering, endorsing, and merge feed are supported. The 3890 image processing capability is used for document flow control through the system. The 1419 is used to provide backup for the 3890.

Notice G320-5687 and PDOM SH20-1845.

ENGLISH COMMUNICATION SKILLS/CAI (COMSKL/CAI)
5796 - AKX

This IUP from the Fox Valley (Wisconsin) Technical Institute is a computer assisted learning system designed to help students gain proficient use of English communication skills through pre-testing and prescription, drill and practice, and final testing. Designed as an interactive learning aid, COMSKL/CAI can be used to reach various learning goals and purposes such as remedial, developmental, adult basic education, general education development, and disadvantaged learners. Divided into thirty-seven concepts (or proficiency areas) COMSKL/CAI may be used in part or adopted as a complete learning system for those concepts covered. A sample of the concepts addressed includes capitalization, nouns, verbs, sentence structure and many more. Each concept is, in turn, divided into separate objectives.

Instructor support features in COMSKL/CAI assist the learning manager to diagnose the learner's strengths and weaknesses in a given concept/objective and then prescribe a learning sequence that would help the student's weaknesses. COMSKL/CAI can also assist the learning manager by reducing the clerical functions common to the learning environment.

COMSKL/CAI uses the 3270 Display System. The upper/lower case character set is supported and recommended for use with this course.

Notice G320-5690, Terminal Reference Guide SH20-1847, Instruction Guide SH20-1848, PDOM SH20-1849, and Course Materials SH20-1850.

PRODUCTIVITY AID:
DL/I BATCH MONITOR FOR DOS/VS
5796 - AKY

This IUP from American Motors (Canada) Ltd is designed to help the DL/I DOS/VS application programmer test and debug DL/I batch programs. In addition, it provides the data base administrator/systems programmer with a means to audit data base calls issued by these programs and to evaluate program performance. The objectives of this IUP are to reduce the time required to implement DL/I batch application programs and to help in tuning the DL/I DOS/VS batch system.

This IUP:

- Aids in performance evaluation and tuning the DL/I system.
- Helps determine when DL/I data base reorganization is needed.
- Helps to audit and control DL/I calls issued by batch application programs.
- Helps measure the effect of using DL/I and VSAM tuning parameters.
- Simplifies problem determination in DL/I call sequences.
- Decreases time spent in debugging and testing DL/I application programs.

This IUP executes with DL/I and the user application program in the DOS/VS batch partition. While monitoring every DL/I data base call issued by the user program, it captures critical information pertinent to the DL/I call and to the system as a whole. Data such as Program Control Block (PCB) feedback information, segment search arguments, I/O area contents, VSAM EXCP counts, elapsed and CPU times are captured for every DL/I call. This information, along with elapsed and CPU time for user code which executes between calls, is reported to the DL/I user at various levels of detail.

To aid an application programmer during the user-program testing cycle, this IUP will print a trace of all DL/I calls in a separate report or interspersed with user-program reports (trace mode) during program execution. In the event of a program check in the DL/I application program, a Program Check Report is automatically generated clearly identifying the type of interrupt, where it occurred, the application program register contents, and a PDUMP of user storage. A full partition dump need not be printed for a user program interrupt. A formatted dump of the last DL/I call issued will print.

This IUP meets the needs of DL/I DOS/VS users in two major areas:

- The data base administrator/systems programmer function of identifying and solving performance problems and auditing DL/I call sequences in user batch programs.
- Increasing application programmer productivity when implementing DL/I batch application programs.

This IUP supports only DL/I DOS/VS data bases which use VSAM (DL/I Entry is not supported). The IUP supports DL/I application programs written in Assembler, COBOL and PL/I.

Notice G320-5697 and PDOM SH20-1858.

VS APL FOR TSO
5796 - ALB

This IUP from Yale University is a TSO command processor written in Assembler Language which interfaces the VS APL Program Product (5748-AP1) to TSO and has been tested running under MVS 3.6 and MVT 21.7. All VS APL interpreter functions are available to the user without modification. All TSO functions defined for use by a Command Processor are unchanged by the addition of this IUP and become available to the APL terminal.

VS APL terminals which are supported include the 1050, 2741, 3270 with Data Analysis feature, 3767, 5100 as well as bit-pairing and typewriter-pairing ASCII APL terminals.

VS APL (5748-AP1) is a pre-requisite and must be ordered separately.

Notice G320-5708, PDOMs SH20-1872 and SH20-1873, and Systems Guide LY20-2255.

STATISTICS AND TESTS MEASUREMENTS
5796 - ALC

This IUP, a Computer Assisted Instruction Course from the University of Akron (Ohio) designed to provide students with a basic knowledge of statistics and its practical applications, is a set of two logically related courses: Data and Test and Measures.

Data is designed to introduce students from a variety of disciplines to subjects in basic statistics. Through presentation on the 3270 and the use of a workbook, the student is introduced to a wide variety of topics in statistics.

Test and Measures is designed to teach the basics of tests and measurements. It is constructed as an item bank of questions on the topic, and the student is directed through the course in a drill and practice mode.

Notice G320-5706, Instructor's Guide SH20-1866, Student's Guide SH20-1867, and PDOM SH20-1868.

SELECTED TOPICS IN ALGEBRA AND CALCULUS
5796 - ALD

This IUP, a set of Computer Assisted Instruction courses from the University of Akron (Ohio) which is designed to supplement several mathematics courses, consists of two courses - a general mathematics supplement and a course in inequalities and absolute values.

The general mathematics supplement, MUMSUP, covers the following sections, each of which may be taken individually: distance formula, graphing lines, slope of a line, quadratics, laws of exponents, domain of real-valued functions, limits, continuity, and a comprehensive test. The time required for a student to complete all of these modules has varied from 8 to 20 hours with an average of 15 hours. The subject is presented on the 3270 and also makes use of a workbook.

The course in inequalities and absolute values, INEQ, covers two areas in higher mathematics: inequalities and absolute values. The organization of this section is inequalities, test on inequalities, absolute values, test on absolute values. Students may choose where they would like to proceed to at the end of each section. The time required for a student to complete this course is approximately 3 to 4 hours.

Notice G320-5707, Instructor's Guide SH20-1869, Student's Guide SH20-1870, and PDOM SH20-1871.

IMS/VS ONLINE DATA ENTRY SYSTEM
5796 - ALH

This IUP from the United Services Automobile Association, San Antonio, Texas, is a generalized data entry system designed to accept data in user designed format (usually corresponding to a source document), edit the data according to user specifications, and reformat the data to an acceptable format for a given application program.

Operating as a set of IMS/VS application programs, the system accepts data in its source document format, performs preliminary field edits, and reformats the data into records compatible with the various target application systems. Data keyed through this system can be transmitted from both local and remote terminals.

This IUP uses a formatted technique or fill-in-the-blank visual display screen. The screens are arranged in source document sequence so that the user does not have to design documents to fit the constraints of a computer program. This feature tends to shield the CRT data entry operator from complex keying requirements.

The preliminary field edits include the normal numeric or alpha checks, table look-up, high-low ranges, and check-digit routines. In addition, entry in mandatory fields, groups of fields, or screens within a document is required before a document can be processed. If a document cannot pass the editing criteria, it may be saved for later correction or it may be deleted. Error free documents may be immediately routed to other online systems, or they can be retained for batch processing.

The system is designed to facilitate the implementation of new applications without modifications to the utility program. It is library or table driven. The Edit Tables provide the edit criteria, document information, and to whom the data is to be sent. The Edit Tables are compiled from English language type commands coded by the user and are transparent to the online program. Format sequence and data element definitions are also supplied by the user. The Edit Tables and Format Libraries are maintained by data processing personnel.

The IUP also provides a training mode whereby the system performs exactly like the regular production mode except that data is deleted instead of being routed to other processing systems.

At the end of the day, management reports are produced which reflect data entry operator productivity and transaction volume by type.

Notice G320-5709, PDOM SH20-1886, Installation Guide SH20-1887, and Systems Guide LY20-2256.

STATEMENT PREPARATION SORT FOR THE 3890
5796 - ALP

This IUP from the Mercantile Safe Deposit and Trust Company, Linthicum, Maryland, is designed for banks which perform cycle sorting and bulk filing to achieve the required check sorting and statement preparation which has become so labor intensive.

On-us checks, returned to the bank daily, are not sorted on the entire account number and hand filed as in most manual systems, but are merely split into a number of cycles—usually one cycle for each business day of the month. These cycled checks are then stored in bulk until their statement dates become due. On any particular cycle day (or statement day), customers extract from their statement file the accounts that have checks processed against them. These should match the checks that have been filed against that cycle.

The system will then build and optimize a fine sort based upon this set of account numbers. For each account number, a six-byte table entry is constructed, consisting of four bytes for the account number (in binary) and two bytes for the pocket destinations. The pocket codes are assigned in such a way that on the last pass (four passes are required) the system will insert separator documents between every account number in a technique called a cascade. After this pass, the checks will be in ascending account number order by pocket. Sequence checking is also performed during the sorting. Item counts and rejects are tracked for each pass. Jammed items are removed and treated as rejects.

During the last pass, the account numbers and the number of checks per account are captured. This file is sorted against the input file, and a listing is produced which shows the number of checks for each account and notes any error conditions that may have been detected (such as overs or shorts). The checks are then sent to the automatic statement rendering machines.

Notice G320-5715 and PDOM SH20-1884.

VSAM CATALOG LIST
5796 - ALQ (DOS/VS)
5796 - ALR (OS/VS)

These IUPs from the Joseph Schlitz Brewing Company, Milwaukee, Wisconsin, produce concise VSAM Centre status reports, providing summary data essential for monitoring day-to-day VSAM space utilization requirements. They are designed to be used as a replacement for the Centre listings produced by the VSAM Centre utility, IDCAMS.

Each program consists of two assembler language programs. Input comes from the VSAM Centre and the Centre utility, IDCAMS. Output is in the form of two reports:

- A VSAM Centre listing in data set name sequence. This report provides the following information for each data set: volume ID ... allocation unit ... primary allocation ... secondary allocation ... number of extents ... number of control interval and control area splits ... control interval size for data area and index area ... record count ... record length ... key length ... relative key position ... any data set which has a CI or CA split, or has gone into secondary allocation, will have the name flagged.

- A VSAM space listing for each storage volume. This report provides the following information by volume: cylinders allocated and available ... number of data spaces and clusters on volume ... for each cluster, the cluster name ... allocation unit ... primary allocation ... secondary allocation ... number of extents.

Notice G320-5716 and PDOM SH20-1885.

DOS/VS SYSTEM PROGRAMMING AID
5796 - ALX

This IUP from the city of Garland, Texas, consists of seven online CICS/VS programs operating in a DOS/VS environment. It was developed to increase the productivity of Garland's programming and operations staff. It addresses a major limitation of online usability of CICS/VS to the system and application programmers. Despite the power of CICS/VS to user groups, programming personnel still submit coding sheets to keypunch, verify card decks, and submit jobs for batch execution. This IUP provides inquiry for displays of file information such as VTOC, directory contents, DASD space availability, and standard label contents. An additional display provides CPU status information, that is paging rate and page pool size, and partition data, such as real and virtual storage allocation, job identification, and I/O device assignment. Use of this IUP can reduce the need to run many batch utilities.

Notice G320-5718 and PDOM SH20-1889.

ACTION CENTRECENTERSUPPORT SYSTEM
5796 - ALY (DOS/VS)
5796 - ALZ (OS/VS)

This IUP from the city government of Garland, Texas, is designed to provide rapid responses to consumer concerns and complaints, and to provide an analysis of that activity. It was written to aid the action centre personnel in handling citizen concerns before they became complaints. Although it was designed to handle the needs of local government, it can be used by any organization that interfaces with a consumer of that organization's product or service.

The criteria of communication, action, responsiveness, and evaluation were used to design and develop the Action Control Support System. This system contains a series of online CICS/VS programs operating in either a DOS/VS or OS/VS environment supplemented by batch programs used to produce various management reports.

Notice G320-5717, PDOM SH20-1888, and Systems Guide LY20-2271.

NURSE SCHEDULING SYSTEM
5796 - ANA

This IUP from the Fairview General Hospital, Cleveland, Ohio, is designed to provide a personalized scheduling system with a limited nursing float pool, while maintaining standard scheduling policies. It assists in staffing to a patient care level and supports a call-in

procedure. As a result of the scheduling and reporting, the system produces management reports.

The online system is accessed via video terminals to display or update core requirements. The programs are written in ANS COBOL and ASSEMBLER, and use Basic Mapping Support. The system runs under CICS/DOS/VS, and the principal access method is ISAM.

Notice G320-5721 and PDOM SH20-1910.

CASH APPLICATION TERMINAL SYSTEM FOR CICS/VS
5796 - ANB

This IUP from E. Kahn's Sons, Cincinnati, Ohio, is a CICS/VS version of the Cash Application Terminal System MTCS (FDP 5798-CDF). It has all the functions of that program plus an *Activity - Audit Log*.

The programs allow the user to enter all of the cash payments online into a batched file, then come back at another time and resolve the payments. Some are resolved by the system and must be verified by the operator; others are resolved by the operator via a light pen. Payments can be partially applied, entered on account, or as a future payment.

Notice G320-5720, PDOM SH20-1911, and Systems Guide LY20-2275.

ONLINE BUDGET ACCOUNTING SYSTEM
5796 - ANC

This IUP from John C. Calhoun State Community College, Decatur, Alabama, is designed to provide educational institutions with an integrated set of budgetary accounting functions. It is appropriate for many state government, local government, and educational organizations.

The system can serve as both an accounting system and an information management system. It readily makes available to the business manager all transactions that have occurred in any budget for the current fiscal year.

Online Operations: At John C. Calhoun State Community College, conversational CICS/VS programs support the use of 3277 Display Stations for common accounting functions. Purchase orders and special checks are printed online at a nearby 3284 Printer.

The range of online function includes daily operations such as purchase order entry, cash receipts, disbursements, non-purchase order check requests, journal entries, and maintenance of the budget and vendor files.

Financial Information Management: The system maintains all budgets, both as to credits and debits, traces cash flow through a budget, and produces many financial reports that are required by the business office.

A comprehensive inquiry program permits selective display of financial data, including transactions for any range of dates during the fiscal year. Batch programs produce monthly, quarterly, and annual reports as well as printing accounts payable checks.

Notice G320-5723, PDOM SH20-1914, and Terminal Users Manual SH20-1915. Marketing Guide ZZ20-4091.

DYNAMIC BTP GENERATOR SYSTEM FOR THE 3760
5796 - ANF

This IUP from Marsh and McLennan, Inc., San Francisco, California, simplifies the work of a data entry supervisor and a computer operator at the point in time when completed batches on a 3760 cluster are ready for transmission to the host System/370.

Without this type of application, the data entry supervisor calls the computer operator and names the batches which are ready. The operator then punches control cards naming each batch and submits the control cards to the 3760 Batch Transfer Program (BTP). An alternative method utilizes a set of control cards naming all batches which can be generated at the 3760. This complete set is submitted to BTP each time the data entry supervisor notifies the operator that there are completed batches ready for transmission. Both alternatives tie up system and/or human resources that might otherwise be used more productively.

This IUP was developed to help complete the automation of data entry, starting with keying data at the 3760 station and ending with the catalogueing of data sets at the System/370 host system.

Highlights:

- Standard Setup - Separate BTP decks are not required for different jobs or job groups. With this IUP, all data transfers are controlled by a single two-step procedure.

- Increased Scheduling Flexibility - A data entry supervisor can select jobs for transfer as they are completed or jobs may be accumulated for combined transfers. Control statements allow further control of data transfer.

- Efficient Resource Utilization - Partially completed jobs may be transfered to free up space on a 3791 disk. BTP executes faster by processing only jobs that have been specified by the data entry supervisor.

- Comprehensive Audit Trail - The IUP provides reports which are helpful in auditing and controlling data entry operations.

This IUP can significantly reduce the operator intervention, amount of voice communication, and machine resources otherwise necessary for data transfers between a 3760 data entry operation and a System/370 host system.

Notice G320-5724 and PDOM SH20-1917.

PRODUCTIVITY AID:
GIS2 AND GIS/VS LIBRARY MAINTENANCE
5796 - ANG

This IUP from ABS Computers, Inc., New York, NY, aids in the management of GIS library data sets. It automates the determination of GIS library and directory entries which are no longer valid.

Notice G320-5727 and PDOM SH20-1921.

ECONOMIC EVALUATION MODEL FOR PSG II/VS
5796 - ANJ

This IUP is a generalized model for the economic evaluation of investment alternatives. Its uses include the evaluation of new investments in plant and equipment ... potential new product lines and promotions ... lease versus purchase alternatives ... make versus buy alternatives ... the financial impact of potential master production plans.

A project for evaluation can consist of up to one hundred different product categories or entities. Project income statements and cash flows are produced showing internal rate of return, payback, and net present value.

Incremental Analysis capability ... data for cases both *with and without project* can be separately specified. The model then computes all incremental values.

Sensitivity Analysis capability ... change percentages can be applied separately or in combination to any of twenty-one *with or without project* variables. Both unfavorable and favorable sensitivity values are then computed.

Capital Simulation capability ... when capital requirements for a project are uncertain, the effects of a wide range of capital values can be simulated.

Flexibility is provided through many input and program options. Independent growth factors can reflect the varying impact of inflation and technology. Working capital requirements, including an initial buildup of inventory prior to sales, are provided. Ultimate project liquidation is provided for -- through possible recovery of inventory and receivables and sale of capital equipment.

Notice G320-5740 and PDOM SH20-1926.

ONLINE NEWSPAPER CIRCULATION SYSTEM
5796 - ANP (CICS/OS/VS)
5796 - ANQ (CICS/DOS/VS)

This IUP from Atlanta (Georgia) Newspapers can handle subscriber starts, stops, restarts, and service complaints. It provides the 3277 terminal operator with transactions to enter them, plus changes in subscriber account and billing information.

The system maintains a router data base of street addresses and automatically selects a delivery route for a new or moving subscriber. The system also maintains a data base of subscriber account information. It allows a subscriber to pay with a credit card on a 13, 26, or 52 week cycle. Optional bill-to information is printed as an interface to a manual billing system.

The system is designed to handle circulation transactions in a consistent, efficient manner, and provides statistical information regarding subscriber stops and complaints that is helpful to circulation management.

Notice G320-5726, PDOMs SH20-1918 and SH20-1920, and Systems Guide LY20-2278.

ONLINE STUDENT REGISTRATION
AND ACCOUNTING SYSTEM
5796 - ANW

With this IUP from William Rainey Harper College, Palatine, Illinois, the class schedule is built online with checking for proper course and instructor information. The system registers students into classes after checking for prerequisites, corequisites, and time conflicts. The cashier collects the student's fee which is calculated by the system, and enters the payment on a terminal to update the student's record.

Notice G320-5751, PDOM SH20-1949, Terminal Users Guide SH20-1950 General Information Manual GB21-9868, and Systems Guide LY20-2303. Marketing Guide ZZ20-3509.

AUTOMATED BILL PAYMENT SYSTEM
5796 - ANX

This IUP from Commercial Federal Savings and Loan, in Omaha, allows one-time and recurring payments of any bills anywhere in the country and transfers money to and from checking accounts. It provides a multi-purpose customer automated bill paying system for financial institutions. This product utilizes the 3270 Display Stations and functions with 5796-NLZ which allows System/7 and 12-key Touch Tone ® telephone input.

This Automated Bill Payment System provides benefits to all the parties involved. The customer gets convenience and time savings; cost savings on stamps, envelopes and checks; better control and record keeping; and for thrift customers, interest on their deposits. The financial institutions can promote a new innovative service; cut paper processing costs inherent in check processing and better promote automatic deposits by payroll. The merchants involved do not have problems with NSF or closed account checks and do receive accurate account and dollar amount information for billing.

*Trademark of AT&T.

Notice G320-5752 and PDOM SH20-1951.

HEALTH CARE SUPPORT/DL/1: PATIENT CARE SYSTEM
5796 - ANY

This IUP from the Duke University Medical Centre, Durham, North Carolina, is a hospital-wide computer information system that provides a communication link between the admissions office, nursing stations, ancillary departments, accounting, and medical records. The system was developed to facilitate, expedite, and integrate the delivery of health care services and the operation of the hospital through efficient data processing.

It is a user-driven system through which service departments and nursing stations can manipulate and manage patient records. This is accomplished by entering doctors' orders through visual displays at the nursing stations. The orders are transmitted to the appropriate ancillary departments, as well as being added to the patient's data base record.

The ancillary departments have the ability to display and/or print work to be done (worklists) and to enter results. Results may then be transmitted back to the nursing station in hard-copy form to become part of the chart, if desired. The result becomes part of the patient's data base record and is available for inquiry through a video display to authorized personnel. Cumulative summaries can also be produced. Charges for services are automatically collected and made available to the accounting system. Upon patient discharge, medical record abstracts are prepared.

The systems supports the ancillary departments at Duke; however, it is implemented in such a way that it can be easily modified to meet individual hospital needs. It can also be implemented in a modular fashion supporting the departments deemed necessary in each individual hospital.

Screens and procedures can be added or modified without programming changes. Processing is determined externally by the user, not by programming. The system builds on the data base established by the Hospital Care System/DL/1 - Registration and Admissions.

Notice G320-5756, PDOM SH20-1955, Terminal Guide SH20-1956, Systems Guide LY20-2306, and Design Guide LY20-2307.

A RESPONSE EVALUATION SYSTEM
Fox Valley Technical Institute, Appleton, WI
5796 - ANZ

This IUP is a set of programs that provides detailed reports and summaries from data collected via the student response file of either Coursewriter III, the Interactive Training System, or the Interactive Instructional System. The reports and summaries are concerned with student performance, item analysis, and utilization of the computer-assisted instruction system and provide valuable tools for both instructors and management.

Availability notice G320-5759, general information manual GB21-9864, and PDOM SH20-1958.

ONLINE LIBRARY CIRCULATION SYSTEM
5796 - APA

This IUP from Charles County Community College, La Plata, Maryland, provides interactive management of library circulation functions. Charge-outs, returns, saves, and renewals are processed by the system with immediate notification of the change in status of each circulating item. Patron and item identification are entered using bar code technology. Batch programs provided with the system provide ready-to-mail overdue notices as well as other reports useful to library management.

Notice G320-5760 and PDOM SH20-1959.

LABORATORY DATA MANAGEMENT SYSTEM ENHANCEMENTS
5796 - APB

This IUP from the University of Alabama, in Birmingham, is an update to the existing Laboratory Data Management System (LDMS IUP 5796-AHD) providing additional functions to the LDMS user. IUP 5796-AHD remains a separately orderable product and is a prerequisite for the Enhancements IUP.

The major addition to the system is the pathology subsystem. Orders and results can be entered and displayed for surgical pathology, cytology, bone marrow, and autopsy. Coded pathologists findings can be stored and can be selectively retrieved based on parameters supplied by the user.

Other enhancements include:

- Comments may be entered with blood bank cross match results.

- Calculations can be made online to produce lab results based on other results.

- Online editing of extreme results is provided. Such results can only be entered as a comment.

- Abnormal result values are flagged on the printed cumulative summary. High and low limits are selected by the user.

- The test definition file can be updated online via CRT.

- A printed cumulative history for any patient can be requested.

- Comments can be entered during order entry.

- Provision of an interface to the Health Care Support DL/I - Patient Registration System (5798-CCB) and the Health Care Support DL/I - Admission System (5798-CCC)

Notice G320-8134, PDOM SH20-1962, and Systems Guide LY20-2309.

ELEMENTARY MATHEMATICS
University of Akron
5796 - APC

This IUP is designed to aid teachers in helping their students' master basic arithmetic skills and understand mathematical operations and concepts in these areas:

Whole Numbers	Proportions
Fractions	Percents
Decimals	Problem Solving
Rations	

The program provides individualized computer-assisted instruction for students that includes pre-tests. Although it covers topics typically in math curriculums in upper elementary and middle schools and is aimed at student in those schools, students whose mathematics performance is below grade level in junior and senior high schools and adult education courses have made effective use of the program. Facilities are also available that enable teachers to use the program to place students individually within the course based on proficiency, adjust time allowance for students, and obtain reports on student achievement.

Availability notice G320-5804, CDAM SH20-1966, and Instructor's Guide SH20-1967.

PL/1 FILE CREATION PROGRAM FOR APL DATA INTERFACE
5796 - PKP

This program enhances three versions of the APL Data Interface IUPs: 5796-PKA for VSAPL under CMS, 5796-PKB for VSAPL under VSPC with VS TSIO, and 5796-PJZ for VSAPL under TSO. The purpose of the program is twofold:

- Performance is improved in the file create process because PL/1 is more efficient in this operation than APL. This can result in significant time savings when large files need to be created on a regular basis.

- The program extends the domain of numeric data to include double word floating point representation. This permits the APL Data Interface IUPs to appropriately handle real numbers with up to 15 digits of precision.

Notice G320-6066 and PDOM SH20-2102.

POWER/VS CHARGE-BACK SYSTEM
5796 - AQJ

This application enhances the installability and usability of the POWER/VS Cost and Performance Analyzer FDP (5798-CDG) with the following functions:

- Unit rate cards for the several categories of data processing cost to be allocated are produced.
- Monthly and yearly statements of allocated costs are produced.
- The programming capability to correct errors caused by POWER/VS job cards is provided.

Together, these two packages provide management with an excellent tool for allocating data processing costs to user departments in a DOS/VS environment.

Notice G320-5809, PDOM SH20-2044, and System Guide LY20-2352.

DISK SPACE UTILIZATION ANALYSIS
TREND ANALYSIS/370
First National Bank of Chicago
5796 - AQK

This IUP is a batch support program designed to support the Trend Analysis/370 program product (5740-F12). This program determines the proportion of the time series data base being used by each Trend Analysis user application. A report is produced showing segment counts by Trend Analysis source number and the total disk usage by source in bytes and as a percent of the whole. The storage usage report can be formatted to show subtotals for user groups having several Trend Analysis applications installed.

Availability notice G320-5750 and PDOM SH20-2039.

TREND ANALYSIS/DATA BASE COPY PROGRAMS
First National Bank of Chicago
5796 - AQL

This IUP is a set of batch support programs designed to enhance the Trend Analysis/370 program product (5740-F12). The two basic programs are designed to copy the description data base and the display data base of Trend Analysis/370.

Availability notice G320-5750 and PDOM SH20-2038.

TIME SERIES DATA BASE MAINTENANCE
TREND ANAYLSIS 370
First National Bank of Chicago
5796 - AQN

This IUP is a batch support program designed to support the Trend Analysis/370 program product (5740-F12). This program takes time series data values from a user-prepared sequential file and loads it into the Trend Analysis time series data base. Each record in the file contains the Trend Analysis source, organization, and data element numbers for the data to be loaded along with the date, frequency, and value of the data. The program makes it possible to handle a variety of user applications with a single batch time series data entry program. The individual user programs to create the standard interface need not make DL/I calls and are independent of source language interface restrictions.

Availability notice G320-5750 and PDOM SH20-2037.

MERCHANTS ACCOUNTING/DATA ENTRY SYSTEM
5796 - AQP

This IUP is a major subsystem of a credit card system. It allows entry of mixed merchant deposits of Master Charge, VISA, and private label drafts. Additionally, it provides monthly merchant net settlement consisting of reports, merchant statements, and checking account debit slips. The merchant report consists of fees and discount analysis, agent analysis, and top 150 merchants by bank plan.

This IUP can be used in conjunction with the Cardholder Accounting System (5796-AQR).

Notice G320-5808, PDOM SH20-2042, Terminal Guide SH20-2043, Error Messages SH20-2041, and Systems Guide LY20-2316.

CARDHOLDER ACCOUNTING SYSTEM
5796 - AQR

This IUP is a major subsystem of a credit card system. It provides comprehensive cardholder accounting functions and contains a CICS/VS online component and a batch component. Online, an authorized terminal operator can open new accounts, perform file maintenance, initiate letter requests, provide authorization for on-us cardholders, and make inquiries.

This IUP can be used in conjunction with the Merchants Accounting/Data Entry System IUP (5796-AQP).

Notice G320-6154, PDOM SH20-1960, Terminal Guide SH20-2033, Error Messages SH20-2041, Systems Guide LY20-2302, User's Guide LY20-2313.

AUTOMATED TELLER HOST SUPPORT SYSTEM ENHANCEMENTS
5796 - AQT

This IUP, from the First American National Bank in Nashville, represents significant enhancements to the Automated Teller Host Support System - CICS/DOS/VS (IUP 5796-ANH), which remains a separately orderable IUP. The enhancements IUP can be ordered by current and new users of the prerequisite Automated Teller Host Support System and integrated into their ATM host application systems under CICS/DOS/VS.

The IUP:

- Operates with 3614 Consumer Online Transaction Systems - Extended Support (FDP 5798-CPY).
- Has new 3614 features ... dual-denomination, DES encryption, and journal printing.
- Supports two additional transactions ... initialize cash and add cash.
- Supports two 3614 commands ... request customized option data and change customized option data.
- Interfaces at the host to the new 3614 Hard Failure Analysis Program.
- Provides a new Monthly Statistics Program.
- Implements Automatic Network Monitoring.
- Has new analysis statistics added to the daily (and monthly) transaction analysis report.
- Supports two transaction records on deposits.

Notice G320-5725, PDOM SH20-2028, Systems Guide LY20-2299, and Terminal Guide SH20-2029.

AUTHORIZATION SYSTEM - ALAMO NATIONAL BANK
5796 - AQQ

This IUP provides an online authorization system for "VISA" or "MASTERCHARGE" using CICS/VS. Negative and exception file maintenance is provided for "MASTERCHARGE" and "VISA"; "MASTERCHARGE" restricted card list maintenance is also provided. Major purchase plan authorizations are provided for on-us cardholders on on-us merchants only. The batch portion of the IUP provides authorization reports by on-us merchant and foreign authorization received from the two centers. This IUP can be used in conjunction with the Merchant Accounting/Data Entry IUP (5796-AQP) or the Cardholder Accounting System (5796-AQR).

Notice G320-6162 and PDOM SH20-2040.

EPIC:SOCRATES ONLINE MAINTENANCE SYSTEM
5796 - AQW

EPIC:SOCRATES is a well know IBM product used thoroughout the education environment for the scheduling of students in secondary schools, vocational schools, community colleges, and colleges. Now EPIC:SOCRATES users can realize the advantages of online inquiry and update to the EPIC:SOCRATES scheduling files with this IUP from Evansville-Vanderburgh School Corp., Evansville, Indiana.

Notice G320-5814, SH20-2049.

ANATOMY AND PHYSIOLOGY
5796 - AQX

This IUP from the University of Evansville, Indiana, provides individual-ized drill and practice in selected areas of anatomy and physiology. Through learner control, the student may choose any of seventeen units and review such topics as how the body controls and integrates its functions, and maintains its metabolism or fluid balance.

The orientation of the course is reviewed via multiple-choice or true/false questions with the student receiving appropriate hints or positive reinforcement depending on the selected answer. Upon completion of a unit, the student is given a progress report on his/her performance for that unit and is given the opportunity to continue with the next sequential unit, select another unit of his/her choice, or sign-off.

Notice G320-5818 and PDOM SH20-2053.

DELEGATION - A MANAGEMENT TRAINING COURSE
5796 - AQY

This IUP from IBM Advanced CBT Development in Poughkeepsie is designed to assist managers in obtaining results through delegation of work. Topics include characteristics of delegation, identifying work to be delegated, and guidelines to effect delegation.

Notice G320-5819 and PDOM SH20-2055.

IMS/VS ONLINE DATA MANAGEMENT UTILITY
5796 - AQZ

This IUP from Blue Cross Hospital Service of Missouri provides the IMS/VS user the facility for catalogue and DASD management. The terminal user may display catalogue, volume table of contents (VTOC), and directory information for a data set; catalogue, unCentre, and scratch data sets; display, rename, or scratch a partitioned data set (PDS) member; rename a DASD data set; send messages to the OS/VS console; and maintain OS/VS catalogue indexes. This IUP provides a productivity tool for application development programmers and system programmers with interactive facilities not previously available under IMS/VS. It has proven to be useful to operations personnel when restarting systems which have failed.

Notice G320-5820 and PDOM SH20-2056.

THE 3800 HIGH VOLUME PRINTING PROGRAM
5796 - ARA

This IUP from Donnelley Marketing, in Des Moines, can print high volume output online to the 3800 Printing Subsystem. The product was designed to maximize throughput rates of the 3800 while minimizing utilization of sytem resources.

The use of QSAM for processing of the input print image records allows the program to be device independent of the storage media used to hold the print image records.

A wide variety of input record formats are supported; blocked or unblocked, fixed or variable, and ASA carriage control characters or no control characters. In addition, reformatting of 3-line mailing labels (4-up or 5-up) is done by the program allowing these labels to be printed on either a 3800 or an impact printer.

Keyword parameters specified by the operator facilitate control over each execution of the program. The 3800 features of FLASH, COPYMOD characters sets (CHAR), table recognition characters (TRC), and BURST can be used along with the IUP.

Notice G320-5821 and PDOM SH20-2057.

IMS/VS RESPONSE TIME MONITOR
5796 - ARB

This IUP from the Philadelphia National Bank is a real-time, table driven system of IMS/VS programs which interact to measure the transaction scheduling capability of an IMS/VS DC System. The user sets the criterion for acceptable response time for each message and the response time monitor measures these response times at regular intervals while the IMS/VS control region is active. Message classes, whose response times exceed the user-selected criteria, are logged and time stamped and the IMS master terminal operator is notified as delays occur. Action can then be taken to alleviate the response time problem or investigate it further. The IMS/VS Response Time Monitor assists IMS operations personnel in avoiding serious response problems.

Notice G320-5822 and PDOM SH20-2058

IBM 3741 REPORT GENERATOR
5796 - ARC

This IUP from American Can, in Greenwich, Ct, provides a high level language capable of generating reports on the 3741 Models 3 and 4. Present data stored on diskettes can be summarized, totaled, or abstracted. The 3741 user now is able to quickly and easily create meaningful reports in response to management requests. The 3741 Report Generator was developed to provide 3741 locations the ability to use existing data and resources in a more productive manner.

The 3741 Report Generator improves the utilization of the 3741 by providing a language which does not require detailed data processing knowledge. The fill-in-the-form approach to programming simplifies report creation. Once a report is created, the 3741 Report Generator saves it in a library of programs. Programs thus stored may be executed at any time without recompiling. The compilation function requires the 3741 ACL Translator (feature code 1350) and the additional 4K storage (feature code 4975).

Notice G320-5823 and PDOM SH20-2059.

THE BANK TELLER 3600 APPLICATION PROGRAM
5796 - ARD

This IUP, from the East New York Savings Bank and Prudential Savings Bank in NYC, subsequently referred to as the 3600 AP, is designed to run in a 3600 Finance Communication Controller. The 3600 AP accepts teller transactions which are edited, verified, transmitted to a central computer, and recorded into a 3600 file for later retrieval. Additionally, it accepts messages from the central computer in response to transmitted transactions and produces the required output such as magnetic stripe encoded data, printed passbooks and other documents, and display panel messages. The 3600 AP also provides control functions which are completely processed within the controller and are not transmitted to a central computer. These functions are invoked by terminal transactions and give the branch control over the operation of the system.

The Bank Teller 3600 Application Program has many built-in functions which enhance the total teller operation, permit branch control over the system, and support the efficient use of the 3600 Finance Communica-tion System. Some of the functions which enhance the teller operation are:

- Full transaction prompting for input and output
- Floating teller capability
- Electronic journaling
- Magnetic stripe processing
- Automatic re-entry of off-host transactions

The programming techniques used allow this program to support as many as fifteen (15) workstations without a need for overlay structures. Output edition techniques permit flexible user document design and a large variety of display messages.

The teller applications which can be implemented using this application program include savings accounts, club accounts, utility payments, loan payments, teller checks, money orders, demand deposit accounts (DDA), and new loans.

This program can interface with a variety of central site environments. It supports the use of bi-synchronous line control or synchronous data link control.

Notice G320-5761, PDOM SH20-1964, and Systems Guide LY20-2310.

IBM 3800 - 90-DEGREE PRINT PROGRAM
New York State Legislature, Albany
5796 - ARE

This IUP provides printing at 90 degrees to normal printer output. Full pages are rotated 90-degrees one at a time and printed using the 90-degree characters provided. Applications requiring printing at greater density than 60 or 80 lines per page can be run on the 3800 printing sybsystem using the paper width rather than the paper depth for printing. Many 3800 installations can benefit from the flexibility of being able to use either 8 1/2" x 11" or 11" by 8 1/2" form sizes without changing the paper in the machine. For 14 7/8" by 11" paper, using the width of the paper as the depth allows 36 percent more lines to be printed at 12 lines per inch, thereby reducing 3800 monthly use charge by the same percentage.

Availability notice G320-5825 and PDOM SH20-2061.

OS/VS1 PRIORITY QUEUE AGING PROCESSOR
5796 - ARG

This IUP is designed to ensure a consistent level of service for all jobs processed in a system. Under the IUP, all jobs are periodically aged or advanced in priority within the input queue. Thus, low priority jobs will eventually reach the highest dispatching priority and be executed in a timely fashion.

Availability notice G320-6050 and PDOM SH20-2067.

DOS/VS CHAINED CHANNEL COMMAND PRINT SUBROUTINE
5796 - ARH

This IUP provides a significant performance improvement for print programs during execution. Benchmark results have shown improvements in both CPU utilization and job throughput when running under POWER/VS. The subroutine is entered via a COBOL or Assembler call statement. The subroutine will execute with or without POWER/VS. Three classes of calls are honored:

1. Open call ... defines the overflow options of having the subroutine count lines or the main program doing it.

2. Execute call ... passes the data to be printed, the type of control desired (before or after spacing or skipping), and receives a return code.

3. Close call ... terminates the print and forces the final print lines when necessary

Notice G320-5828 and PDOM SH20-2066.

IMS/VS MASTER TERMINAL OPERATOR TRAINING-II
5796 - ARJ

This course can be used to train personnel how to use IMS/VS commands and how they relate to the major functions of controlling an online IMS/VS system. Using a workbook in conjunction with an online terminal, students are led through a series of exercises that simulate master terminal operation. During simulation students will be exposed to startup, shutdown, recovery, monitoring and controlling situations similar to what they might encounter in the live environment.

The discussions and exercises are applicable to IMS/VS Versions 1.0, 1.1, 1.3, and 1.4. Commands for both BTAM and VTAM are included.

This course is designed to operate under the Interactive Instructional System (5748-XX6) or the Interactive Training System (5734-XXC).

Notice G320-6052, Student Workbook SH20-2069, and CDAM SH20-2071.

THE 3270 EMULATOR PROGRAM FOR 3600 SYSTEMS
5796 - ARL

This IUP resides in the 3601/3602 Controller and allows an administrative terminal operator to perform data entry or inquiry/response functions under control of host programs written to support the remote 3270 Display System. The program has been designed for 3600 controllers attached to multipoint communication facilities using the binary synchronous communication line discipline. The design will allow 3600 systems to coexist on multipoint lines with remote 3270 systems and will allow use of common polling/ selection lists in the host system.

The IUP will allow current users of remote BSC 3270 Display Systems to migrate to 3600 Administrative Display Systems with minimal amount of host program modification. Where formatted displays already fit within the limits of the 3604 Model 4 display size, no host modification will be required.

The IUP:

- Emulates the most commonly used functions and capabilities of remote 3270 Display Systems

- Supports the IBM 3601/3602 Controllers with the binary synchronous communication line discipline

- Provides formatted and unformatted displays

- Provides operation data transmission, and error recovery for the 3604 Keyboard Display Model 4

Notice G320-6051 and PDOM SH20-2068.

Maintenance, Engineering and Store Systems

The following IUPs (5 modules) together constitute a maintenance system developed by North Central Airline. They are IMS/VS based and offer a multi-industry solution to problems related to control of maintenance, preventive maintenance, inventory control, and scheduling of capital investments.

Notice G320-6055, PDOM SH20-2074, and User's Guide SH20-2075.

PROBLEM/CORRECTION REPORTING
5796 - ARP

This IUP is the first of five modules. It permits the entering of each maintenance problem that is related to each major unit or equipment. The system offers the capability to display any or all outstanding problems on any mamor piece of equipment at any time. This information enhances maintenance scheduling and results in increased productivity of maintenance personnel. Once the maintenance item has been performed, the corrective action is entered into the system to close the problem. Corrective action is tied to the respective problem closed.

CATALOG INQUIRY/PARTS ORDERING
5796 - ARQ

This IUP is the second of five modules. It is designed to help the user determine the company's unique part number (up to 10 digits) when requesting a part from the stockroom. Most parts of equipment carry a manufacturer's part number (15-20 or more digits). By keying in this number, the system cross-references to the unique company part number and displays the full description of the respective part. If neither the unique company part number or the manufacturer's part number is known, the system provides the user the ability to enter the keyword of the part (i.e., tire, valve, pump, etc.). The system would

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display those parts that have a similar keyword. The display includes the full keyword, part description, manufacturer's part number, and the company's unique part number. From the list displayed, the user utilizers the light-pen to select the part required.

The part selected is printed out in the respective location of the stockroom where it is retrieved by the stock clerk and delivered to the user location.

COMPONENT MAINTENANCE
5796 - ARR

This IUP is the third of five modules. It maintains parts removal, parts installed, and maintenance accomplished for individual units of equipment. The history of these actions is maintained by this module.

Model assemblies for all equipment type are maintained for comparison purposes.

TIME ON PARTS/FORECASTING
5796 - ARW

This IUP is the fourth of five modules. It enhances the maintenance system's capability to forecast maintenance dates for each unit of equipment. The time a unit of equipment is utilized is put into the system on a period basis. The frequency of reporting *times* to the system would vary as related to the type of equipment being monitored. (The term *times* may mean different things to different parts.)

When an allowable *times* or *usage* is established for a type of equipment and/or component, the forecasting facility of the system will compare the accumulated actual time or usage against the established allowable time or usage to determine the amount of time or usage remaining. By dividing the remaining time or usage by the average time or usage per day of that particular unit of equipment, the system calculates not only the suggested date that maintenance should be scheduled but also what specific maintenance items should be accomplished.

RELIABILITY
5796 - ARX

This IUP is the last of the five modules. It produces user requested reports for removal frequency and history for any type of part. These reports permit reliability analysis of a part's performance to be accomplished from chronological facts over time.

Systems Guide LY20-2363.

DISCOVER: THE CAREER GUIDANCE SYSTEM
DISCOVER FOUNDATION, Inc., Westminster, MD
5796 - ARY

This IUP was designed to bring today's computer technology to the aid of school children and their guidance counselors in performing the career guidance process.

Availability notice G320-6056, Marketing Brochure G520-3258, PDOM SH20-2082, Installation Guide SH20-2083, System Description and Counselor Guide SH20-2084, Terminal User's Resource Guide SH20-2085, InService Training Manual SH20-2086, DISCOVER Modules chart SH20-2089, and Career Decision Tree Chart SH20-2090.

3270 FULL SCREEN SUPPORT FOR COBOL USING TSO
5796 - ATK

This IUP provides the COBOL programmer with the ability to utilize the facilities of the 3270 under TSO without being concerned with the details of formatting the screen. The IUP is invoked with five easily coded CALL statements and uses the COBOL WORKING-STORAGE SECTION to specify parameter lists.

IMS/VS MESSAGE REQUEUER (MR)
5796 - ATP

The Message Requeuer is an IMS/VS operational aid which permits an installation to reinsert input and output messages back into an IMS/VS system from IMS/VS log tapes after IMS/VS has normally or abnormally terminated. The messages are reinserted with their original timestamp and are inserted in original time sequence. An audit trail is produced which records messages that could not be reinserted because of changes in the IMS/VS environment such as the elimination of transaction codes or logical terminal names. This is an extended support IUP.

Notice G320-6071 and PDOM SH20-2106.

MCGILL UNIVERSITY SYSTEM FOR INTERACTIVE COMPUTING (MUSIC) IV
MCGILL UNIVERSITY, MONTREAL, CANADA
5796 - ATL

MUSIC IV is an interactive operating system complete with a collection of utilities, compiler interfaces, and application packages. The collective goal is to provide a high performance, cost-effective and manageable time sharing environment. Concurrently users may be performing such diverse activities as problem solving, program development, file editing, word processing, computer-assisted instruction, and batch processing. Flexible hardware requirements enable its use over an impressive spectrum of IBM computers — from the System/370 Model 115 to the powerful 303X processor. It operates in both the VM/370 and dedicated machine environments.

Notice G320-6068, *General Information Manual* G320-1238, PDOM SH20-1103, User's Guide SH20-1104, and Script User's Manual SH20-1658.

EMERGENCY LOG TERMINATOR
5796 - ATN

This IUP is to be used when an IMS/VS system log tape cannot be otherwise closed through normal programs and procedures. This typically occurs following a catastrophic failure such as a power failure.

Expeditious closing of the IMS/VS system log tape is required to attempt IMS/VS emergency restart as soon as possible after a system failure. This is frequently successfully done by the existing IMS/VS System Log Termination Utility Program (DFSLOT0). When DFSLOT0 is not successful, such as when the system dump is not available, due to a power failure, the log must be closed in some other way before an emergency restart can be attempted. In both online and batch IMS/VS environments, the properly closed log is also needed to effect data base recovery. To insure the integrity this requires, use of the IMS write ahead log facility is a prerequisite for this IUP.

Notice G320-6070 and PDOM SH20-2105.

PC/3600 TRANSACTION DOCUMENTER AND CROSS REFERENCES
5796 - ATR

This IUP provides two reports which assist in the development, operation, and maintenance of application programs created with the Program Customizer for 3600 (DOS/VS and OS/VS).

Notice G320-6077, PDOM SH20-2110.

THE 2260 COMPATIBILITY FOR CICS/VS USING VTAM/TCAM
5796 - ATW

This IUP provides code and procedures which enable most CICS application programs written for the 2260/2741 to be easily converted to run in an SNA environment with either VTAM or TCAM. The IUP requires a 3270 with a 1920 character screen or greater and is designed to reduce the time needed to migrate existing 2260/2741 CICS/VS applications to VTAM or TCAM by replacing the DFHTC macro with a new PSCTC macro.

Notice G320-6079 and PDOM SH20-2112.

GLOBAL SHARED ACCESS METHOD (GSAM)
5796 - ATX

This IUP is a set of programs designed to provide safe and easy access to VSAM data from multiple jobs running concurrently under MVS. It provides record-level integrity, thus permitting simultaneous updating of records located in the same control area or control interval. There is no modification to MVS, instead Global Shared Access Method supplies a simple interface to an existing set of VSAM I/O request options. File access control can be tailored to the needs of many users and particular data bases, yet data integrity and security are maintained across the system.

Notice G320-6083, PDOM SH20-2117, Programmer's Guide SH20-2118, and Systems Guide LY20-2372.

3800 SYSTEM DESIGN AND CODUMENTATION AID
5796 - ATY

This IUP provides data processing organizations using OS/VS COBOL and a 3800 Printer with the ability to standardize and more easily maintain installation documentation. Using the Hierarchy plus Input-Process-Output (HIPO) technique, standardized documentation for installation management activities is produced on the 3800 Printer in the form of Visual Table of Contents (VTOCs) and HIPO diagrams. Commands are in 8-character images which are submitted either through cards or TSO. The program is a series of modules written in OS/VS COBOL.

Notice G320-6082 and PDOM SH20-2116.

DOS/VS HEALTH CARE SUPPORT DL/I PATIENT CARE SYSTEM
5796 - ATZ

This IUP is a hospital-wide computer information system that provides a communication link between the admissions office, nursing stations, ancillary departments, accounting, and the Medical Records Department. The original OS/VS version of the system (5796-ANY) was developed by the Duke University Medical Centre in Durham, North Carolina. The system was designed to facilitate, expedite, and integrate the delivery of health care services and the operation of the hospital through efficient data processing. It is a user-driven system through which the service departments and nursing stations may manipulate and manage patient records.

Notice G320-5756, PDOM SH20-1955, Installation Guide SH20-2119, Terminal Operator's Guide SH20-1956, Systems Guide LY20-2306, and Design and Coding Guide LY20-2307.

IBM 3760 AUTOMATED DOS/VS JOB SUBMISSION
5796 - AWA

This IUP is a subroutine which uses the standard user-exit feature of the 3760 Batch Transfer Program (BIP) 5747-BW1. As data is being transferred from the 3760 to the System/370 via the Batch Transfer Program, the subroutine examines the 3760 job name and wraps the data records with their corresponding JCL statements by way of SLI statements. The job stream is then put in the POWER/VS job class. At execution time, the SLI statements cause JCL statements to be inserted in the job stream. Without this program, the standard Batch Transfer Program writes the 3760 data entry batches on tape or disk requiring the user to establish numerous SYSIPT files and control procedures to maintain the separate files.

Notice G320-6085 and PDOM SH20-2121.

3600 STATISTICS AND MESSAGE LOG FOR CICS/DOS/VS
5796 - AWB

This IUP allows the report functions of FDP 5798-CLC to be obtained under CICS/DOS/VS, (FDP 5798-CLC is a prerequisite for successful operation of the IUP). The reports provided by this IUP assist the user in tuning and controlling a 3600 network.

Notice G320-6084 and PDOM SH20-2120.

LABORATORY DATA MANAGEMENT SYSTEM II
UNIVERSITY OF ALABAMA IN BIRMINGHAM
5796 - AWC

The Laboratory Data Management System II (LDMS II) is the system currently supporting the laboratories at the University of Alabama in Birmingham. This IUP assists the laboratory in handling patient and laboratory data associated with total processing of laboratory requisitions from their receipt to the production of the patient's cumulative test results report. It supports all sections of the laboratory including microbiology, blood bank, and pathology. Its primary objectives are to reduce the clerical workload, reduce error, decrease turn-around time and produce a patient's cumulative summary of test results.

Notice G320-6080 and PDOM SH20-2126.

IBM 3800 PAGE FORMATTING SERVICES
5796 - AWE

This IUP was developed to take advantage of almost all IBM 3800 features and benefits with minimal education and effort on the part of the application programmer. Using a forms specification language in COBOL data definition format, this IUP generates COBOL subroutines and test data to produce sample IBM 3800 documents. Both batch and TSO procedures are provided for this phase. Once tested and acceptable, these IUP generated subroutines can be called by PL/1, Assembler, or COBOL application programs to produce the desired IBM 3800 documents in a production environment.

Notice G320-6089 and PDOM SH20-2125.

IBM 3790 BASIC KEY TO DISK SYSTEM
5796 - AWF

This IUP provides an alternative to keypunch or 3740 Data Entry units for batch data entry in a 3790 distributed environment using 3277-2 displays. The package was not designed for high-volume, high-speed transcriptive data entry as is the 3760/3790. It is intended to supplement interactive data entry applications with the ability to do low volume batch data entry with minimal editing by end users. All of the functions of a 129 or 3742 are supported with the exception of auto record advance, multipunch, and prompting.

Notice G320-6090 and PDOM SH20-2127

CICS/DOS/VS IBM 3270 CONTROL FOR REMOTE 3600 SYSTEMS
5796 - AWG

This IUP consists of a set of CICS/VS application programs which provides certain PC/3600 control functions to an IBM 3270 terminal operator.

Notice G320-6091 and PDOM SH20-2128.

LABORATORY DATA ACQUISITION SYSTEM
5796 - AWH

The laboratory data acquisition system provides operational support facilities to acquire data from automated clinical laboratory instruments directly into a computer. The system is an extension of the Laboratory Data Management System II (IUP 5796-AWC) and is designed to be used in conjunction with it. The system supports a Series/1 attached over a communication link to a System/370.

Notice G320-6095, PDOM SH20-2163, and Systems Guide LY20-2413.

PATIENT CARE SYSTEM - RADIOLOGY
PARKLAND MEMORIAL HOSPITAL, DALLAS
5796 - AWJ

This IUP operates as an application under the Patient Care System IUP. The system provides for entry of radiology orders (from nursing stations), including multiple procedures on one requisition. Result reporting may be free form text for abnormal x-rays or text generation by the entry of a three-letter code for normal x-rays. Interim results are printed at the nursing station. The system also provides for the printing of requisitions and flash cards, logging of patients, statistical gathering and reporting, and capturing and displaying of film history.

Notice G320-6092, PDOM SH20-2159, and terminal operator's guide SH20-2160.

HEALTH CARE SUPPORT DL/1
UTILIZATION REVIEW SYSTEM
FORSYTH MEMORIAL HOSPITAL, WINSTON-SALEM
5796 - AWN

This IUP is an online tracking and data maintenance package that assists the hospital in performing these required procedures. The online functions permit utilization review personnel to enter, review, and update the patient's record. The daily and monthly statistical reports for daily hospital operations and institutional reporting requirements are produced by the system.

The IUP is compatible with and complimentary to the prerequisite Health Care Support DL/1 - Patient Registration System (5798-CCB) and the Health Care Support DL/1 - Admission System (5798-CCC).

Notice G320-6157 and PDOM SH20-2173.

CICS/VS ONLINE PROMPTING FACILITY
CONSOLIDATED EDISON COMPANY OF NEW YORK
5796 - AWQ

This IUP provides a CICS/VS operator with prompting information. It allows the operator the facility of using new applications immediately with little or no required operator instruction manuals. It is beneficial for a new operator unfamiliar with currently operational applications and/or an experienced operator who is using an application to which new options and/or functions have been added.

Notice G320-6158, PDOM SH20-2175, and Systems Guide LY20-2420.

3850 CARTRIDGE OFF-SITE STORAGE SYSTEM
(BORDEN, INC.)
5796 - AWZ

The objective of this IUP is to help automate the ejection, off-site storage, and retrieval of 3850 virtual DASD volumes (2 cartridges per volume). These virtual volumes contain duplicate copies of actual production data sets. The virtual volumes are scheduled to remain off-site for a length of time determined by a user defined control statement.

When a volume returns from off-site storage it can be re-entered into the 3850, where the expired data sets are automatically scratched and the volumes are re-used.

Notice G320-6063-3.

APL TEXT EDITOR AND COMPOSER
5796 - PAC

This IUP for processing text interactively at a terminal is for use by secretaries, scientists, engineers, administrators, or others who produce papers, letters, reports, or specifications.

It is written in APL, and includes functions for entering, revising, composing, printing and storing text. The operator has a wide choice of type styles because any type element, including upper and lower case, can be used on the terminal.

Notice G320-1516, PDOM SH20-1080, and Systems Guide LY20-0743.

IMS VERSION 2.3 PRODUCTIVITY AIDS:
5796 - PBC ... DATA BASE DOCUMENTATION (IMSMAP)
5796 - PBE ... APPLICATION TESTING (TEST IMS FACILITIES)

These IUPs support the design, development, testing, and documentation of IBM data bases and application programs.

User productivity in the installation and test phases of IMS applications can be increased by effective use of these versatile IUPs. This acceleration of application development and installation can be considered a basis for customer cost savings.

IMSMAP ... 5796-PBC: Notice G320-1523, PDOM SH20-1305, and Systems Guide LY20-0773.

TEST IMS UTILITIES ... 5796-PBE: Notice G320-1523, PDOM SH20-1307, and Systems Guide LY20-0775.

TERMTEXT/FORMAT
5796 - PBR

This IUP is designed for the in-house publisher of books, catalogues, directories, and technical manuals. Coupled with the power and versatility of the Advanced Text Management System (ATMS), it provides the total facilities of text entry and correction through typewriter like and display terminals, and comprehensive page makeup. TERMTEXT/Format accepts text from ATMS and automatically puts it in the format requested by the user. Pre-defined formats, called *profiles*, can be established once and then used as required.

Notice G320-2533, PDOM SH20-1372 and SH20-1373, and Systems Guide LY20-0940.

PRODUCTIVITY AID:
DATA COMMUNICATIONS ANALYZER (DCANALYZER)
5796 - PCA

DCANALYZER is a design evaluation tool to assist the user in the comparative evaluation of IMS data communication design alternatives with a potential reduction of effort and expense.

It provides statistics on service times and throughput of messages processed in the IMS system. The messages, defined by the user, are processed by a test message processing program tailored to simulate application programs and access prototype data bases.

No actual teleprocessing hardware is necessary. Feeding of messages, at a rate specified by the user, is controlled by a batch message driver program. Results of each evaluation run are printed showing service times by type of message and throughput under the test conditions.

The user can analyze the results, revise the specifications for the proposed system and run DCANALYZER again. Repetitive processing

of the test case under a variety of design combinations provides relative timings so the user can select the design best suited to his needs.

DBPROTOTYPE (IUP 5796-PBB) can be used to generate test data bases for DCANALYZER. If DBPROTOTYPE is not used, generation of the test data bases in the format required by DCANALYZer becomes the responsibility of the user.

DCANALYZER uses the standard features of OS or OS/VS (all releases) and IMS 2.3 DB/DC system.

Notice G320-1532, PDOM SH20-1368, and Systems Guide LY20-0937.

MONITORING OF SITE FACILITIES (HOST)
5796 - PCE

This IUP is one of a pair required to monitor site facilities. It enables a System/370 or System/360 to provide host facilities and significant reporting capability. The other, 5796-PCB, marketed by GSD, controls a dedicated System/7 and 5097 Industrial Translator System in the monitoring of large numbers of plant security, protection, and facility sensors.

Potential benefits include real time identification of power failures, fire alarms, gas leaks, security violations, equipment breakdowns, pollution violations, etc. The surveillance and equipment monitoring functions can help reduce manpower requirements for watchman tours, preventive maintenance, and manual equipment inspection. Comprehensive operational data, such as security data, equipment utilization data for preventive maintenance scheduling, and equipment malfunction tracking are provided.

Notice G320-1537, PDOM SH20-1382, and Systems Guide LY20-0942.

PRODUCTIVITY AID:
DOSMAP - DL/I
5796 - PCW

This IUP is a logical approach to better documentation and communication related to DL/I DOS/VS data bases. It builds and prints a pictorial layout of the data base descriptions and program specification blocks.

The program should be run each time the data base is changed. The printouts serve as a handy reference to assist in visualizing logical and physical relationships within the data base. They can act as visual aids for training and as a recording medium to retain the historical and current status of the data bases. The maps can also be used as a reference when the data base requirements of current and proposed applications are compared and evaluated.

Notice G320-8159, PDOM SH20-1769, and Systems Guide LY20-2208.

PRODUCTIVITY AID:
IMSMAP/VS
5796 - PCY

This IUP is a documentation aid which produces pictorial representations of data base structures. These maps, which are produced on a line printer, graphically represent the many characteristics of an IMS/VS data base. In addition to producing maps, IMSMAP/VS can print a detailed report describing the characteristics of each data base description.

IMSMAP/VS is an extension of IMSMAP (IUP 5796-PBC). IMSMAP is a prerequisite for IMSMAP/VS. IMSMAP/VS provides both support for IMS/VS data bases and additional features not available in IMSMAP.

Notice G320-1538, PDOM SH20-1539, and Systems Guides LY20-2050.

PRODUCTIVITY AID:
TEST IMS/VS UTILITIES
5796 - PDA

This IUP is designed to aid in testing and checking out application program code by automating the functions of organizing, displaying, and comparing test data. If performed manually, those functions can consume a large portion of customer programming manpower. This set of programs can assist the programmer in effectively managing test data and more rapidly evaluating test results.

Test IMS/VS Utilities, an enhancement of Test IMS Utilities (IUP 5796-PBE), provides support for IMS/VS data bases and adds new functions to Test IMS Utilities. Test IMS Utilities is a prerequisite for Test IMS/VS Utilities.

Notice G320-1540, PDOM SH20-1541, and Systems Guide LY20-2052.

JOB CONTROL LANGUAGE EDITOR
5796 - PDC

This IUP is designed to bring to the batch user of OS/MFT, OS/MVT, OS/VS1, OS/VS2 an easily used text editing capability for Job Control Language. It will expedite any conversion effort involving modifications such as converting from OS to VS or from one I/O device to another.

Notice G320-1542, PDOM SH20-1552, and Systems Guide LY20-2064.

VM/SGP - STATISTICS GENERATING PACKAGE
5796 - PDD

This IUP is designed to further reduce the data collected by the VM/370 Measurement Facility, and is intended to provide information for installation management, system programmers, and users.

VM/SGP provides a variety of summarization techniques useful for reporting on many aspects of system load and utilization. It also can be used simply to format and print trace data, thereby facilitating the inspection and analysis of system bottlenecks and overloads.

Notice G320-5530, PDOM SH20-1550, and Systems Manual LY20-2059.

PMS IV NETWORK PLOTTING PROGRAM
5796 - PDE

This IUP is a set of programs which produces network diagrams (PERT charts) of projects which are being planned and controlled by the PMS IV program product.

It is designed to use the normal output datasets of PMS IV as its input. There are a variety of options that make it easy to use and flexible. The charts are drawn on the system line printer so that the program requires no additional hardware investment.

Notice G320-5531, PDOM SH20-1556, and System Guides LY20-2068 and LY20-2069.

AUDIT-SOURCE CODE COMPARE (DOS/VS)
5796 - PDF

This IUP analyzes the differences between two versions of a program's source code. The variations detected by this audit/control tool are highlighted on a message listing which, in turn, becomes a vehicle the user can use to verify that only authorized changes are made to an installation's sensitive programs. The Audit-Source Code Compare program has been used by the IBM Corporate Information Systems Department audit/control group as a tool to assure that only authorized changes are made to the installation's programs.

The program has been tested under DOS/VS Release 30. Although there are no special hardware requirements, the 3330 Disk Storage file must be used unless appropriate source code changes are made. Minimum system configuration with the 3330 is a S/370 Model 125, with two magnetic tape units, one 3330, card reader and line printer.

The program can be executed on an S/370 Model 115 if the appropriate source code changes are made for use of the 3340 Direct Access Storage Facility.

Notice G320-5532 and PDOM SH20-1567.

INTERACTIVE QUERY AND REPORT PROCESSOR (IQRP)
5796 - PDG

This IUP is a terminal-oriented information retrieval system which operates under the control of CICS/OS/VS and allows a terminal user to extract information and reports from direct access data sets.

As a general purpose system, it is adaptable to a wide variety of needs and conditions and can be employed directly by the end user, at a terminal, to generate a wide variety of applications.

The IUP's language facility, which is a flexible, non-procedural, and powerful tool, is designed to allow the end user to create his own applications. The user can enter inquiries in a language similar to English which can easily be tailored to each particular application area or to each user's own requirements. The functions provided by the language include a complement of arithmetic operations, sorting, totaling, and output formatting. Both file inquiry and updating can be restricted through the use of the security system. Reports can be printed at the user's terminal under the control of CICS/OS/VS or directed to the system printer for later processing. A batch processing mode can also be utilized by using the system card reader for inquiry input and the system printer for report outputs.

Notice G320-1544, GI Manual GB21-9903, User's Reference Card GB21-9902, Terminal User's Guide SH20-1561, PDOMs Book I SH20-1561 and Book II SH20-1562, Op/Install Guide SH20-1563, and Systems Guide LY20-2072. Marketing Guide ZZ20-3424.

AUDIT-SOURCE CODE COMPARE (OS/VS)
5796 - PDH

This IUP is designed to analyze the differences between two versions of a program's source code.

The variations detected by this audit/control tool are highlighted on a message listing which, in turn, becomes a vehicle the user can use to verify that only authorized changes are made to an installation's sensitive programs. The Audit-Source Code Compare program has been used by the IBM Corporate Information Systems Department audit-control groups as a tool to assure that only authorized changes are made to the installation's programs. This program may be executed under any S/370 VS1 or VS2 system. Minimum system configuration is a S/370 M135, 64K partition, card reader, printer and 3330.

Notice G320-5532 and PDOM SH20-1568.

WIDEBAND COMMUNICATIONS PROGRAM
5796 - PDJ

This IUP is a complete system for transmitting tapes or sequential data sets between locations on a communications network. It is capable of transmitting data at speeds from 1200 BAUD to 230.4 KB over leased, point-to-point lines under control of BTAM and OS/VS. Data can be transmitted directly from tape-to-tape, tape-to-spool, spool-to-tape, or spool-to-spool from a local to a remote location. Locally, data can be transferred between spool and tape or spool and sequential data sets.

Store and forward capability is provided through routing tables defined at installation. Checkpoint/ Restart is provided. Data security features include data set compaction, optional keyword-driven scrambling of sensitive data and routing verification. Data compaction is designed to eliminate consecutive characters and allow most printable characters to be transmitted in less than eight bits, providing the potential for significant savings in transmission time. Offline support utilities can provide spool maintenance and statistical reports on transmission activity. Data may be sent and received simultaneously by executing multiple copies of the program concurrently.

The online transmission programs are written in Assembler and the statistical report programs are written in PL/I Optimizer (5734-PLI) and require the PL/I Transient Library (5734-LM5) during execution. The minimum system requirement is a System/370 Model 135 running under OS/VS1 or a System/370 Model 145 running under OS/VS2.

Notice G320-5540, PDOM SH20-1670, and Systems Guide LY20-2181.

VM/370 GRAPHIC MONITOR
5796 - PDT

This IUP is designed for the VM/370 privileged users to observe the operation of the VM/370 system and the users logged into the system. VM/370 users can observe how the CPU resource is used as it is being distributed, the rate each user connected to the VM/370 system (up to limits of screen display size) is using the system and rate of utilization of the DASD and tape devices. This is accomplished via individual screen displays for system, user and device utilization which are then written to each support graphic device available. The program continually creates the data displays when executing so that when the graphic devices are made available for display purposes full display capability is available.

The IUP requires a CMS virtual machine with a virtual 1403 Printer, a CMS A-disk of sufficient area to contain data acquired during graphic monitor operation and 512 kilobytes of virtual storage.

Notice G320-5534, PDOM SH20-1619, and Systems Guide LY20-2073.

APL ECONOMETRIC PLANNING LANGUAGE
5796 - PDW

This IUP is an interactive planning language based upon APL.

It provides features for dealing with economic variables (primarily time-series), such as data analysis and transformation, tabular and graphic display, parameter estimation, model solution and file handling. It requires the installation of the APL Shared Variable Programming RPQ 5799-AJF.

The practicing economist, business forecaster, or teacher is provided with easy-to-use tools by interactive model building and model solving. Care has been taken to use much of the power inherent in APL, using its available set of primitive functions and its compact data handling and logic capabilities.

Notice G320-5535, PDOM SH20-1670, and Systems Guide LY20-2074.

INTRODUCING ... THE COMPUTER
5796 - PDX

This IUP, which runs under ITS, is designed to provide an understanding of computers and data processing.

The course covers An Introduction to Data Processing ... An Electronic Data Processing System ... Data Recording Media ... Storage Devices ... Central Processing Unit ... Input/Output operation ... Input/Output devices ... Advanced Data Processing Concepts.

This IUP is designed to teach individuals who come in contact with electronic data processing and its terms, but are not concerned with the details of programming. These instructions can enhance understanding and contribute to better overall job performance.

Notice G320-5536 and PDOMs SH20-1657 and SH20-1724.

VS/REPACK
5796 - PDZ

This IUP provides a tool for the user to improve the performance of individual programs running in a VS environment by reducing their paging requirements and working set size. VS/Repack guides the programmer in reordering program CSECTS to achieve these objectives based upon an analysis of program's current storage reference patterns. The programmer runs the program to be analyzed under the VS/Repack trace facility and examines the output of the trace with the VS/Repack analysis programs in order to determine a code structure with more compact reference patterns.

The VS/Repack can assist the programmer in reordering CSECTS for improved program performance, reducing wasted program space,

interactive testing of assumptions without recoding, relinking, or rerunning the program being analyzed, graphically displaying program activity, debugging program/logic errors related to abnormal sequencing of storage references, and confining a program's address space references to fewer pages for extended periods of time.

Notice G320-5539, GI Manual GB21-9880, PDOM SH20-1669, and Systems Guide LY20-2180.

ASSEMBLER H/CMS INTERFACE
5796 - PEJ

This IUP makes available to VM/370 CMS users the benefits of OS Assembler H performance improvement and language extensions. During installation of the interface, the user can make optional modifications to suit normal assembly requirements. These modifications allow alteration of the default values for assembler options, establishment of the DD names for assembler data sets, and selection of the machine instruction set the assembler is to support. After installation is completed, a simple CMS command with assembly time options is used to invoke Assembler H to assemble user specified files. Programs written for Assembler F and OS/VS Assembler can also be assembled with Assembler H. ALC source program input may be from CMS files, OS data sets or OS partitioned data sets. To use Assembler H/CMS interface, the user must also have the OS Assembler H, Version 5 program product (5734-AS1) basic material.

Notice G320-5541 and PDOM SH20-1671.

OS/VS1 OPERATOR TRAINING EXERCISES
5796 - PFA

This IUP is designed to run under ITS to train operators on OS/VS1 system commands and how and when to use them. Hands-on practice is provided as students are presented with simulated situations and asked to respond with the appropriate system command. Learning is reinforced by repeating simulated situations that the student did not respond to correctly.

The exercises presented in this course were originally developed by IBM's Education Development Department and are current for OS/VS1 Release 4. Up to ten exercises are included for the general, frequently used commands. The more specialized commands may have fewer exercises.

Notice G320-5545 and PDOM SH20-1719.

CONVERSION AID:
ISAM-to-DL/I COBOL PROGRAM TRANSLATOR:
   5796 - PFB (DOS and DOS/VS)
   5796 - PFC (OS, OS/VS, and VM/370)

These IUPs assist users in their conversion from ISAM files to integrated data-base management under DL/I. The IUPs convert COBOL source programs that use ISAM into exactly equivalent COBOL programs that use DL/I to access the same data. At the same time, the IUPs detect and diagnose unusual programming techniques (if any) that may require revision to operate in an integrated data-base environment. The programs provide a complete audit-listing of this conversion, or, if the user chooses, an exceptions-only listing at either of two levels of detail.

Using either IUP the user is helped by:

. Detecting all occurrences of ISAM-related usage in a COBOL source program.

. Converting all common ISAM-related COBOL statements into equivalent DL/I statements. These DL/I statements are organized in a standard and easily modified form for all translated programs.

. Diagnosing and identifying errors in COBOL syntax or unusual usage of ISAM that may require manual changes to conform to the user's intended operating environment under DL/I.

. Providing the user with a simple level of control over the translation process through use of control cards.

The minimum storage requirements are an 80K partition or region in either real or virtual storage. Each IUP requires two work data sets and one output data set in addition to the standard system input/output data sets. A re-assembly of the Translator may be required to enlarge the work area for COBOL programs which have an FD that exceeds 250 cards.

Notice G320-5551, PDOMs SH20-1761 for DOS, DOS/VS and SH20-1762 for OS, OS/VS, VM/370, and Systems Guide LY20-2204 for DOS, DOS/VS and LY20-2205 for OS, OS/VS, VM/370.

INTRODUCTION TO COMPUTERS
FOR 3270/INTERACTIVE TRAINING SYSTEM
5796 - PFD

This IUP is the Interactive Training System version of this course. The course is intended for students having no prior knowledge of computers and no more than a command of general high school mathematics. The computer managed instruction course utilizes a self-study text and online review and post testing.

The course introduces the user to computer organization and typical operations. Specific coverage includes: data processing concepts, programming concepts, elements of the central processing unit, data coding, central processing unit operations, instruction modification, buffering concepts.

Notice G320-5543, and PDOMs SH20-1714, SH20-1757, SH20-1770, and SH20-1771. Marketing Guide ZZ20-3407.

NUMBERING SYSTEMS
FOR 3270/INTERACTIVE TRAINING SYSTEM
5796 - PFE

This IUP is the Interactive Training System version of this course. This course is applicable to a broad audience. The course may be used independently or as a supplement to a mathematics curriculum. Through the selective teaching facility of this course, users can, by demonstrating proficiency on prerequisite questions matched to specific objectives, select any of the following topics: binary counting, binary and hexadecimal arithmetic, numbering systems conversion, hexadecimal floating point conversion.

Notice G320-1544 and PDOMs SH20-1715 and SH20-1768. Marketing Guide ZZ20-3407.

HIPODRAW
5796 - PFF

This IUP provides significant productivity improvements in application development. It provides machine-generated HIPO diagrams for DOS/VS and OS/VS users in either batch mode or in interactive mode with either TSO or VM/CMS.

The primary advantages of HIPODRAW are: it automates documentation maintenance as well as document generation...it provides a

consistent and high quality format for all HIPO diagrams. The use of the IUP may also encourage programmers and analysts to keep the documentation current, because it:

- Automates the preparation of HIPO documentation.
- Greatly simplifies HIPO diagram maintenance.
- Has a straightforward series of statements as input.
- Produces high quality HIPO diagrams on a line printer.
- Supports standard and custom print trains.
- Provides diagrams which conform to the recommendation in the publication *HIPO - A Design Aid and Documentation Technique*, GC20-1851.

Notice G320-5546, PDOMs SH20-1728 and SH20-1821, and Systems Guide LY20-2201.

CONVERSION AID:
FORTRAN
5796 - PFG

This IUP assists in converting various non-System/370 FORTRAN dialects to System/370 executable code.

Conversion is accomplished by a combination of translation, documentation, hand modification, re-compilation, and object-time library simulation.

The IUP provides automatic conversion where feasible, manages semantic and syntactical differences, provides documentation aid for manual conversion, is easy to learn, use, and modify, and is modular and extendable.

Notice G320-8154, PDOM SH20-1727, and Systems Guide LY20-2199.

DOS/VS SDL/SVA LIST OPTIMIZER
5796 - PFH

This IUP is a utility program which reads the FETCH TRACE tape produced by the supervisor PDAID=YES option and produces a list of DOS/VS modules ordered by frequency of fetch. The list is printed and punched. The punched output is a job which can be used to rebuild the System Directory List with the objective of reducing fetch times.

Features include a flag at the 59th most frequently entered module because 59 entries will reside in a virtual page. Normally, 20 to 30 modules will account for 90% of the fetching activity. The program also produces an alphabetic list of modules fetched and a count of modules fetched by partition. Usage of this product has indicated that performance improvements, as a direct result of a reduction in module fetching, can be in the range of 2 to 20 percent.

Notice G320-5547 and PDOM SH20-1749.

PANEL - A LINE CUT TECHNIQUE
5796 - PFJ

This IUP provides a documentation tool that addresses the problem of producing line art. With Panel, many line art tasks may be quickly accomplished. The user supplies input through a vector graphic display device. Output may be obtained at the display or on a high speed line printer. As an installation assistance, the standard flowcharting and HIPO diagraming symbols are supplied as standard, predefined objects.

Notice G320-5548, PDOM SH20-1750, Systems Guide LY20-2202, and Panel Worksheets GB21-9881.

GRAPHICAL ANALYSIS PROGRAM
5796 - PFK

This IUP provides a highly interactive system for analyzing and presenting data in an effective pictorial form. The program which is written in APL is designed to be used on a 2741 or graphic terminal but requires the vector display devices when one wishes to plot graphs. The program is designed about the concept that a curve is a string of numbers in a vector, and that a graph is composed of sets of paired curves in which one curve of each pair is the independent variable and the other, the dependent variable. We extend this concept to define a picture as composed of one to four graphs.

The program has a standard default for plotting graphs which applies to linear graph paper, choice of axis limits to scaling and reading of graph, easy reading form for annotating the numerical values for the axes, and non-overlap of numerical values.

Notice G320-5549, PDOM SH20-1752, and Systems Guide LY20-2203.

DISK VOLUME MAP
5796 - PFL

This data management control aid for the systems programmer IUP provides the following information: distribution of data on the disk volume, which data sets should be compressed, and availability of space. It utilizes the OS/VS IEHLIST utility output to graphically display a schematic map of the entire disk volume. A data set table, arranged in alphabetical order, provides detailed, comprehensive information about each data set. Optionally, a list of all members in the partitioned data sets and of all entries in the catalogue will be provided automatically without having to separately specify each data set. To help avoid abnormal program terminations due to the lack of available space, the data set table flags those partitioned data sets in need of compression. Expired data sets are flagged so they can be deleted and the space utilized for other data sets.

This IUP requires the IEHLIST utility and is written in assembler language. Minimum systems requirements are the universal instruction set, a 192K (real or virtual) region or partition, direct access device for temporary work files, printer with the universal character set and print line length of at least 112 characters, and the direct access storage device being analyzed, e.g., an IBM 3330, 3340, 3344, 3350, 2311 or 2314.

Notice G320-5550 and PDOM SH20-1755.

PRODUCTIVITY AID:
TSO CODES UPDATE SYSTEM
5796 - PFR

This IUP can be used by a TSO System Administrator to automatically create unique passwords for TSO users. It can eliminate manual updating of the passwords and help increase the security and manageability of the TSO password facilities. Because the TSO/Codes Update System uses both the Julian date and time of day as input to its randomizing routine, the same series of passwords should not be reproduced within a 100-year cycle, and likely will never be reproduced.

The IUP is designed to be used with 'SNAP-OUT' form-type mailers which are readily available from various form vendors. The program prints the new password, name and address, and any user message on the cover sheet of the special form. This cover sheet is removed and held as the master listing and is used for the auditing process. The new password and message are printed only on the cover sheet and on the inside part of the form. This is accomplished by the arrangement of carbons within the form-type mailer envelope. The new password is visible only when it is separated from the envelope portion of the multipart form. The use of these forms can reduce the amount of handling, thereby helping to increase security and potentially decreasing maintenance costs.

The TSO/Codes Update System is made up of two programs. The first phase of the two stage process uses the actual TSO User Attribute Data Set (UADS) and a user address file as input. The program verifies that the two files match and identifies any discrepancies. Unique passwords are created for each valid USERID in the TSO System. Each password is made up of two alphabetic and three numeric characters.

For each valid TSO User, the program prints a multiline user-provided message and the new password on the mailer-type form which is then mailed to each TSO User. This same form and program can be used to audit the TSO security system. The auditor merely changes the message requesting return of the form with a management signature. If a form is not returned, the USERID can be disabled or deleted from the system by the TSO administrator. The first phase program also places each new password and USERID on a future change data set. The change data set is later used as input to the second phase program which makes updates directly to the TSO User Attribute Data

Set. This automatic method is much faster and can be more secure than the present TSO password change facility.

Notice G320-5653 and PDOM SH20-1805.

PRODUCTIVITY AID:
INTERACTIVE DATA MANAGEMENT FOR VS BASIC
5796 - PFT

This IUP permits users to create, control and maintain data as required. It provides the non-programmer with the capabilities of creating, updating, sorting, listing and using data files which are made up of records of his or her own design. Portions of records or all records can be modified by adding, deleting or changing rows, columns and data items. Files can also be subsetted through selection and extraction.

The facilities provided by this IUP permit VS BASIC users in all industries to use data in a wide variety of applications since the data maintenance is separate from its use.

This IUP requires the installation of the VS BASIC Compiler (5748-XX1) and must have the same system requirements as the VS BASIC compiler.

Notice G320-5658 and PDOM SH20-1800.

APL FORECASTING AND TIME SERIES ANALYSIS
5796 - PFX

This IUP is a multi-workspace system which provides the user with interactive model solving that employs the Time Series Analysis techniques developed by Box and Jenkins. It offers the business analyst, forecaster or production planner a procedure for the identification, specification, estimation, diagnosis and determination of model forecasts and results. These forecast results are computed for future values based on current and past data values. Output is presented in report data format. Many facilities to aid model building and forecasting are provided such as: seven data transformation facilities and twelve plot routines; not restricted to the order of model or degree of differencing both for seasonal and non-seasonal models; diagnostics for the models include standard error with *t* value and confidence bands, correlation matrix and residual plots, thereby offering a high degree of flexibility for the user.

Notice G320-5664 PDOMs SH20-1806 and SH20-1807, and System Guide LY20-2235.

FUNDAMENTALS OF FLOWCHARTING
5796 - PFY

This IUP is a Computer Managed Instruction (CMI) course designed to teach students the basics of flowcharting and introduce them to the structured programming technique of HYPO diagramming. Completion of the course should enable students to meet the following objectives:

- Identify the meaning of each of the basic flowcharting symbols and those symbols used in programming.

- Read a basic flowchart and demonstrate knowledge of flowcharting by identifying the action taken at each step in the chart.

- Analyze problem statements and construct flowcharts of the steps required to solve the problems.

The course uses a student text, a book of figures, and online tutorial material to teach the subject.

Notice G320-5657 and PDOMs SH20-1797, SH20-1798, and SH20-1799.

3661 FILE CREATION PROGRAM
5796 - PFZ

This IUP supports the 3660 Supermarket System. The 3661 Store Controller uses customer-supplied options to control the checkout terminals in a supermarket, performing price look up, check authorization, automatic tax calculation, multiple pricing and maintaining various types of store report information. These options must be specified at the Host CPU and communicated to the controller in machine language. This IUP provides a means for the customer to specify the options desired, allow changes to be made to those selections and generate the data stream necessary to load the controller.

Notice G320-5678 and PDOM SH20-1820.

IMS TRANSACTION PROFILES
5796 - PGG

This IUP was developed to process IMS log information collected from IMS installations in surveys conducted by the GUIDE and SHARE User Organizations. Reports on the results of these surveys are available to customers through their IBM systems engineers. The IUP produces reports which can reveal a broad spectrum of characteristics of the transaction workload on an IMS DB/DC system. The information can provide early recognition of problem situations and identify the individual transaction processing programs involved. The increased understanding of the transaction workload can also provide the user with confidence in the ability of the system to absorb added applications or help to identify when the capacity of the system should be increased.

Highlights

- Processes standard IMS/360 or IMS/VS log tapes.

- No overhead imposed on the online system.

- Multi-faceted profile reports provide concise characterization of workload.

- Time-sequenced (period) profile reports reveal short-term variations in workload.

- Transaction code list identifies the most used transactions and their characteristics in each period.

- Audit report individually identifies *abnormal* transactions.

- Transaction code profiles reveal the behaviour of individual transactions.

- Fully defaulted input parameters provide for data selection and control.

Audit and Control Features

- Input parameter validation and feedback.

- Information messages on ususable data.

- Summary counts of records read and used.

Notice G320-5667 and PDOM SH20-1810.

DISTRIBUTED COMPUTING SYSTEM:
5796 - PGH (EVENT DRIVEN EXECUTIVE HOST
COMMUNICATION FACILITY - System/370)
5796 - NFW (EVENT DRIVEN EXECUTIVE - System/7)

The Distributed Computing System provided by these two IUPs consists of a System/370 host computer and one or more System/7s. The combination can use the individual capabilities of both systems to good advantage, and new System/7 application programs can be prepared without disturbing the operation of installed programs.

The EVENT DRIVEN EXECUTIVE HOST COMMUNICATION FACILITY provides online or batch host communications for the transmission of data and System/7 programs; BSCA, ACCA, or SBCU options for System/7 - System/370 communications link (SBCU with OS/MVT only); and online source program entry, edit, and submission for assembly to the System/370 host program preparation facilities via commands from the System/7 Operator Station (5028) or remote operator terminals.

The system is designed to provide the user with the advantages of a host-satellite approach to computer networks. It enables System/7 application programs to utilize the power of an attached host system for optimum data analysis and reporting. Additionally, it has the key objective of simplifying the application program preparation functions through the use of utility programs supplied with the EVENT DRIVEN EXECUTIVE IUP.

The host can be used to prepare System/7 application programs and to execute host programs which operate in conjunction with System/7 programs. For example, data can be sent from a System/7 to the

System/370 for processing and results returned to the System/7 for display. The system has been designed with special emphasis on the ability to attach multiple System/7s to a single System/370 host processor.

The EVENT DRIVEN EXECUTIVE is designed to be a highly responsive system supervisor controlled by a Command Set to facilitate the generation of data acquisition and control programs for event-driven applications. Central to this objective is the support of multiple independent, time dependent, or event-driven applications with minimum interaction.

Notice G320-5677, PDOMs (System/370) SH20-1819 and (System/7) SB30-0812, and Systems Guides (System/370) LY20-2241 and (System/7) LB30-0813.

DISKETTE SORT PROGRAM
5796 - PGJ

This IUP enables users of DOS/VS Sort/Merge (5746-SM1) to sort diskette files without first having to copy them onto tape or disk. It is distributed as source macros which, when assembled into an E15 Sort User Exit routine, can read one file and pass the records to the sort.

The IUP is written in System/370 Assembler Language, developed and tested under DOS/VS Release 32, and also tested under the control of DOS/VS POWER/VS.

Notice G320-5684 and PDOM SH20-1842.

OS/VS1 PERFORMANCE TOOL (VS1PT)
5796 - PGL

The performance of a System/370 running OS/VS1 depends on many complex and interrelated factors. Manual or theoretical methods cannot adequately evaluate machine/system performance. This IUP is a software tool that provides the ability to measure and report many performance-related factors of such as system.

Used on a regular basis, VS1PT can aid in an understanding of the system's internal operations. The measurement detail can be used to identify where changes to the system may produce an improvement in overall performance. Finally, an analysis of the VS1PT reports can assist in determining which resources are available for the future growth of the system.

Selective measurements include:

    CPU utilization and queuing
    Real main storage occupancy and paging
    Program module usage
    Supervisor calls
    Channel utilization
    Device utilization and queuing
    DASD seek analysis
    System data set utilizations
    Analysis by partition, including:
       Virtual storage assignment and deactivation
       CPU utilization and queuing
       Real main storage occupancy

RELEASE 2.0

The following new functions are available with this release —

- I/O device and system data set queueing.

- Average response times and EXCP counts for I/O devices and system data sets.

- CPU utilization by partition report enhancement.

- Enhanced Seek reports.

Notice G320-5680, PDOM SH20-1837, and Systems Guide LY20-2243.

The use of VS1PT in marketing other IBM products is described in DP Letter 276-72.

SVS PERFORMANCE TOOL (SVSPT)
5796 - PGN

The performance of a System/370 running SVS depends on many complex and interrelated factors. Manual or theoretical methods cannot adequately evaluate machine/system performance. SVSPT (formerly VS2PT, an IBM Aid) is a software tool that provides the ability to measure and report many performance related factors of such a system.

Used on a regular basis, SVSPT can aid in an understanding of the system's internal operations. The measurement detail can be used to identify where changes to the system may produce an improvement in overall performance. Finally, an analysis of the SVSPT reports can assist in determining which resources are available for the future growth of the system.

Selective meaurements include:

    CPU utilization and queuing
    Real main storage occupancy and paging
    Program module usage
    System resource ENQUEUEs and SVCs
    Channel utilization and overlap with CPU
    Device utilization and queuing
    DASD seek analysis
    System data set utilizations
    Analysis by job and job step, including:
       Elapsed execution time
       CPU utilization and queuing
       Real main storage occupancy

Release 2.0 includes:

    Expanded seek reports including 3350 fixed head support, selectable ranges, and 3350 compatibility mode ... expanded plots allowing the user to select up to 50 devices to plot compared to the previous 15. The average request queue size will be included on all device plots ... TSO analysis which includes CPU utilization and real storage used by the TSO region and control, TCAM, and all running tasks.

Availability notice G320-5681, PDOM SH20-1838, and Systems Guide LY20-2244.

APL STATISTICAL LIBRARY:
5796 - PGQ (APLSV AND APL/CMS)
5796 - PHW (VS APL)

These IUPs are designed for use in solving problems in statistics and linear programming. They are written in the APL language for ease of use by statisticians, engineers, research workers, business analysts, and others who solve statistical problems. The interactive operation of the Statistical Library simplifies usage, allows concentration on problem solving, and reduces the delays and some of the sources of error encountered using batch mode. Users may perform analyses as needed, thus obtaining faster solutions and increasing their productivity.

The functions provided include the following general categories:

    Descriptive Statistics
    Inferential Statistics
    Analysis of Variance
    Regression Analysis
    Correlation Analysis
    Quality Control
    Non-linear Least Squares
    Reliability Analysis
    Linear Programming

IUP 5796-PGQ requires the installation of APL Shared Variables Release 2.1 (PRPQ 5799-AJF) or APL Shared Variables Release 3 (PRPQ 5799-AQC). In an APL/CMS environment, the tape should be converted via the installation procedure described in the *APL/CMS Installation Manual* (SC20-1845) under "Using the Conversion Utility Programs."

Notice G320-5688, PDOM SH20-1841, and Quick Reference Guide GX20-2001.

BATCH TERMINAL SIMULATOR II (BTS II)
5796 - PGT

BTS II, an Extended Support IUP, is a terminal simulator that allows online IMS/VS application programs to be tested in an IMS/VS batch environment without the use of telecommunications hardware. Extensive debugging facilities enable the BTS II user to test batch applications as well as those intended to run in a telecommunications environment.

Key Functions, Facilities, and Features

- Supports conversational or nonconversational as well as BMP, MSG, and batch application programs
- Provides extensive debugging and trace facilities for both batch and telecommunications applications
- Permits the testing of online application programs without the installation of telecommunications hardware
- Supports the IMS/VS message formatting service (MFS) function for the 3277 display stations, Models 1 and 2, and 3278 display stations, Models 2, 3, and 4, as well as for 3284/3286 printers
- Simulates the message queuing and application program scheduling functions of the IMS/VS data communications feature. This allows the support of conversational programming and program-to-program transaction routing
- Supports testing of application programs written in COBOL, Assembler, or PL/1
- Provides automatic program documentation by printing 3270 input and output formats and by tracing the interaction between IMS/VS and an application program
- Full-screen support for TSO simulating IMS/VS operation from 3270 terminals under TSO.

Notice G320-5686 and PDOM SH20-1844.

PRODUCTIVITY AID: APL FUNCTION EDITOR:
5796 - PGX (APLSV)
5796 - PGY (VS APL)

This IUP is a comprehensive package for the development and modification of APL functions. It brings to the APL user a powerful interactive tool which can be used to edit in context, search, copy, or list any function in his workspace. The resulting ease of modification provides greater productivity through the automation of time-consuming activities like variable name changing and searching through functions for particular character strings.

The Editor is patterned after the CMS Editor of VM/370. Those functions of the CMS Editor which appeared useful for the editing of APL functions are implemented. Several more, uniquely useful in an APL environment, give the Editor more function.

Notice G320-5689, PDOM SH20-1846, and Systems Guides LY20-2247 (APLSV) and LY20-2248 (VS APL).

BATCH MONITOR FOR VM/370
5796 - PGZ

This IUP allows a VM/370 CMS terminal user to direct jobs which do not require conversational supervision to one of four virtual *batch* machines. The major highlights of the program include: terminal user inquiry into *batch* machine workload, scheduling of batch jobs on a job size basis, systems workload balancing, and extensive control and restart facilities. The major potential benefit to a user of this program is increased CMS terminal user productivity.

This program was designed to help the programmers, scientists, and researchers at the Research Centre who use VM/370 CMS with facilities for their batch program activities. Use of the IUP at the Research Centre contributes to CMS user productivity and better computer system utilization.

Installing the IUP requires user alterations to six VM/370 CP and CMS modules; less than 50 executable assembler statements are affected. As with any user alterations of IBM System Control programming, these alterations create an exposure to potential field engineering billing for program support. Prospective users should be provided with a copy of Information Bulletin for Customers Alterations to IBM Supplied Program (G120-2238) to help them evaluate this exposure.

Notice G320-5691, PDOM SH20-1851, and Systems Guide LY20-2249.

SYSTEM/360/370 CONCEPTS/PROGRAMMING COURSES
FOR 3270 AND INTERACTIVE TRAINING SYSTEM:
5796 - PHE ... Part I (Concepts)
5796 - PHF ... Part II (Programming)
5796 - PHG ... Part III (System/370 Enhancements)

Concepts is a course which presents indepth tutorial coverage of the basic design of the 360/370 lineage of computers. With this course, students of computer science or those interested in a career in computer technology or maintenance can gain a good insight into basic computer knowledge. Utilizing extensive terminal interaction, users are instructed in such areas as: main storage, central processing unit, addressing schemes, interrupt processing. This course presents a broad basis for future computer study and serves as a prerequisite to Parts II and III of the System/370/360 System Concepts and Programming IUPs.

Programming is for those interested in careers in programming and/or computer operation and who are familiar with the basic concepts of System/360/370. This course provides tutorial instruction and simulated programming experiences. Courses objectives include identifying the input/output process of the assembler language ... coding assembler instructions ... recognizing I/O data formats ... recognizing and identifying portions of a dump listing. With an expected average completion time of 25 hours, this course provides extensive introductory programming knowledge on an individualized basis.

System/370 Enhancements addresses the basic design and programming improvements of System/370 over the earlier System/360. This course provides a comprehensive wrap-up for the System/370/360 System Concepts and programming series of courses. Included in this tutorial offering is a description of System/370 features and instruction set. Specifically, the course covers introduction to System/370, virtual storage, System/370 instructions, system control features, I/O concepts, and programming techniques. Designed with selective review and other learner control options, this course can readily be used by trainees, as well as experienced operations and programming personnel interested in upgrading their knowledge of current systems.

PHE: Notice G320-5692, PDOM SH20-1853, Administration Guide SH20-1524, Final Exam SH20-1526, Student Text SH20-1525.

PHF: Notice G320-5693, PDOM SH20-1853, Administration Guide SH20-1528, Final Examination for Programmers SH20-1531, Final Examination for Technicians SH20-1530, Student Quiz for Technicians SH20-1532, Student Quiz for Programmers SH20-1533, Student Workbook SH20-1529, Book of Figures SH20-1534.

PHG: Notice G320-5694, PDOM SH20-1853, Administration Guide SH20-1536, Student Self-Study Guide Part I SH20-1537, Student Self-Study Guide Part II SH20-1538.

STOCKHOLDER TRANSACTION ONLINE CONTROL SYSTEM

The Basic Stockholder Records and Stock Transfer System (5796-PHH) is a prerequisite for the Dividend System (5796-PHJ) and the Stock Split and Stock Dividend System (5796-PHK). The latter two are independent of each other and can be installed and used separately.

BASIC STOCKHOLDER RECORDS AND STOCK TRANSFER SYSTEM
5796 - PHH

This IUP can maintain shareholder records, maintain certificate records, transfer stock, answer stockholder inquiries, solicit proxies, and conduct stockholder surveys. This is accomplished by a combination online, offline system. The online application provides for data entry of stock transfers, indicative changes, certificate issuance, and proxy transactions, and an information retrieval capability of the up-to-date stockholder ownership and certificate files. The offline application provides a complete update system and a wide range of supporting functions, including: File Maintenance (purge and merge/purge), Stockholder Reporting (annual and quarterly), Management Reporting, and Proxies and Proxy Reconciliation.

Data for the stock transfer transactions or the stock transfer sheets, where outside transfer agents are used, are entered through local and/or remote online display terminals. The system determines the validity of each transaction and prepares for the updating of the master stockholder ownership and certificate information files. Stockholder inquiries are serviced by the online system's inquiry function. The up-to-date master files and any additional online information files can be browsed by account number as well as stockholder name.

The update system is a batch system in which the credit, debit, and indicative transaction records from the online system are used to update the master files. Output files from the update are used to generate a complete array of reports and print the stock certificates. File maintenance of the master files, including purging of obsolete accounts, is done by the Purge and Merge/Purge application.

Mailing of stockholder publications such as the quarterly or annual reports is supported by the Stockholder Reporting function. This application provides for automated printing of address cards or labels to facilitate the mailing operation.

Various management reports used for information and statistical analysis can be requested through the Management Reporting function. Management control reports on stock transfer and stockholder records changes are available online or on demand in printed mode.

The Proxy application generates and reconciles the proxies voted by the stockholders prior to the annual meeting. The system provides reports detailing the status of the voting at any time. The input and reconciliation of proxies are performed both online and offline. The online function allows the direct entry and verification of incoming proxies. Once verified, the proxy transaction is used directly to update the proxy file, providing timely information on the voting, annual meeting attendance, and share balance for every account as well as overall totals. Proxy input is feasible on a realtime basis while the annual meeting is in progress.

Notice G320-5705, PDOM (Book 1 - Program Descriptions) SH20-1932 and (Book 2 - Operations and Installation Instructions) SH20-1933, Terminal Users Guide SH20-1859, Master Terminal User Guide SH20-1860, Systems Guide LY20-2252, and Systems Guide - Appendix LY20-2296. Marketing Guide ZZ20-4092.

DIVIDEND SYSTEM
5796 - PHJ

This IUP has online operations and offline processing.

The *online operations* permit the inquirer to check the status of dividends paid to stockholders covering the previous five quarters. The status of each dividend is shown as either cashed or still outstanding. The record of dividends paid prior to the previous five quarters is also maintained as long as the dividend checks remain uncashed.

If the stockholder loses a dividend check, the terminal operator can place a stop on the lost check and can cause a replacement check to be issued. Other adjustments also can be applied to the Dividend Information file as part of the online processing.

These adjustment transactions provide quick turnaround for the stockholders and more accurate records since complete editing of the adjustments can be done at the time of online entry.

All checks issued as a result of these adjustments can be printed on the 3286 printer.

The *offline processing* adds and deletes dividends applicable to a quarter when required and creates a file for backup purposes.

At year end, reports are prepared showing domestic and foreign payments (1099/1042) for accounts. The system can provide year-end dividend totals at the same time as the final quarter dividend payment, thus requiring only a single mailing. The system generates machine readable tapes for the governmental authorities (State, IRS). Year-end state tax reports are also provided. The system does not reconcile dividend checks.

The Basic Stockholder Records and Stock Transfer System (5796-PHH) is a prerequisite.

Notice G320-5705, PDOMs SH20-1932 and SH20-1933, Terminal Users Guide SH20-1859, and Master Terminal User Guide SH20-1860. Marketing Guide ZZ20-4092.

STOCK SPLIT AND DIVIDEND SYSTEM
5796 - PHK

This IUP is designed to handle stock splits and stock dividends of any size. The basic input the system is the stockholder information record which contains the stockholder records as of the split date.

The system has two processing phases:

The function of Phase 1 is the issuance of stock certificates for holders of shares that are multiples of the stock split. In addition, order forms to buy full shares or to sell fractions of a share are issued to shareholders with a fractional portion of the declared split amount. Stockbrokers with large numbers of shares can receive a specified

number of certificates with specified denominations. This capability is provided by the entry of broker request cards which control the breakdown of shares.

Phase 2 will process the shareholders' requests to buy or sell fractions of a share. Returned order forms are processed to determine if a shareholder should receive a bill or a check. Checks are printed for shareholders selling theri fraction of a share, and bills are printed for shareholders buying the remaining fraction of a share.

The Basic Stockholder Records and Stock Transfer System (5796-PHH) is a prerequisite.

Notice G320-5705 and PDOMs SH20-1932 and SH20-1933.

CONVERSION AID:
SMF JOB DATA COMPRESSION AID (JDCA)
5796 - PHN

This IUP and its companion, the Storage Device Migration Aid (SDMA), IUP 5796-PHP, are tools designed to help OS or OS/VS installations manage their tape, DASD, and MSS configurations.

JDCA produces a base file of edited and reduced System Management Facilities (SMF) data. This base file can be used by SDMA. Consequently, JDCA is a prerequisite for SDMA. In addition, JCDA base file data can be printed, rearranged, or summarized by user-written programs. In this latter case, JDCA can simplify the task of processing SMF's variable-length records.

JDCA provides a number of useful options for controlling the data in the base file. It also provides summary reports for estimating the validity of the SMF data processed. JDCA can process SMF data from up to nine OS or OS/VS systems.

For additional information, see SDMA, IUP 5796-PHP.

Notice G320-5714, PDOM SH20-1882, and Systems Guide LY20-2268.

CONVERSION AID:
STORAGE DEVICE MIGRATION AID (SDMA)
5796 - PHP

This IUP generates a series of reports from the base file created by the Job Data Compression Aid (JDCA), IUP 5796-PHN. These reports include information about data sets and jobs. The information in the reports can be custom tailored by use of one or more filters. The filters enable the customer to study the specific data sets and jobs of interest.

JDCA and SDMA are designed to simplify migration to a new I/O configuration, but they can also be used for other purposes. They can help:

• Detect the need for I/O configuration upgrades.

• Determine the changes to be made.

• Plan migration to the new configuration.

• Monitor the progress of migration.

• Estimate the date of the next I/O configuration upgrade.

• Monitor compliance with installation standards.

• Improve system performance by optimizing data set placement and characteristics.

JDCA and SDMA, if used together, provide many of the functions supported by IBM Marketing Aid 1 (MA/1). New reports are included that simplify detailed migration planning.

Users of these IUPs will be able to keep all of the reports produced and use them freely for their own purposes. These IUPs enables users to get involved with I/O configuration studies at an early date and assume the primary responsibility for processing the data and analyzing results.

System/370 users of SDMA can benefit from a special optional service. They can send a data set produced by JDCA/SDMA to IBM for analysis. The data submitted is descriptive in nature. It characterizes the user's installation and the way the installation operates. No data relating to data set names or their content, programmer names, accounting information, etc. is transmitted in this data set. The

customer will receive a report from IBM that compares his installation with the other installations that have also used this service. That information can help identify areas for improvement.

Notice G320-5714, PDOM SH20-1883, and Systems Guide LY20-2269.

JES3 MONITORING FACILITY
5796 - PHR

This IUP provides the MVS/JES3 user with information on the activities and resource utilization of JES3. This information can be used to evaluate the performance of an existing MVS/JES3 system and to understand the impact of particular JES3 functions on the entire system. Used on a regular basis, JMF can assist in identifying changes in the JES3 environment which effect overall JES3 performance. Such information may also be useful in planning for future growth of the system.

The JMF IUP reports provide information on the following areas of JES3: CPU utilization ... paging and allocated page frames ... subtask utilization ... function activity and summary ... spool activity and I/O chaining ... buffer utilization ... job analysis - time spent in each function ... job execution summary ... JES3 device allocation activity ... module utilization ... function queue statistics.

Notice G320-5713, PDOM SH20-1881, and Systems Guide LY20-2270.

The use of the JES3 Monitoring Facility in marketing other IBM products is described in DP Letter 276-72.

FORTRAN INTERACTIVE SUBROUTINE LIBRARY (FISLIB)
5796 - PHT

This IUP consists of a library of subroutines to be called by user-written FORTRAN programs. These subroutines facilitate implementing application-unique interactive command languages. Such languages are needed where it is not possible for the problem solver to anticipate all possible conditions, i.e., it is often necessary to get partial results and then modify the sequence of execution or data to obtain desired results.

FISLIB is used where the interaction of human decision making ability with the computer program is essential to permit users to choose between alternatives at key points during program execution. The desk calculator facility, which is included in the IUP, is an example of the user of FISLIB subroutines.

The major effort required to implement an interactive application using FISLIB is in breaking up programs into independently executable subroutines. Since FORTRAN programs are very often built using large numbers of subroutines, breaking these programs up into separately executable segments may be relatively easy to accomplish. Interactive execution may then be achieved by inserting FISLIB call statements into the application's main-line code and defining the interactive language through FISLIB CALL parameters.

Desirable interactive language characteristics made possible by FISLIB include obtaining results without learning internal program structure ... English-like phrases ... input to a terminal in a free-form (non-rigid) syntax ... the ability of the interactive user to define complex functions of procedures based on user-defined basic commands ... abbreviations that can be automatically accepted and synonyms that are easily defined ... appropriate error messages ... guiding users in proper use of commands (query and answer technique) ... an easy way for a FORTRAN programmer to write, understand, and modify due to simple structure (especially in an environment where application program specifications can change frequently) ... the ability to execute CMS commands from user-defined command procedures.

Most of the above are standard features of command languages for systems like TSO, CMS, and TSS, but are rarely included in interactive application programs. The completeness of the package is indicated by the number of special subroutines provided.

Notice G320-5729, PDOM SH20-1923, and Systems Guide LY20-2280.

APL STATISTICAL LIBRARY - VS APL
5796 - PHW

See 5796-PGQ.

IMS APPLICATION DEVELOPMENT FACILITY
5796 - PHX

This IUP provides a means for quickly and efficiently developing application programs for IMS/VS. It relieves the need for a programmer to code in detail many of the most frequently used IMS functions. Provided with the IUP are program modules which execute DL/I calls, format and deformat 3270 screens, edit input data, verify user authority and route messages between applications and system users.

Additional programs are furnished which provide the logic necessary to combine the functional modules into executable IMS application programs. To specify the function required in an application, the programmer defines parameters, called 'rules', which are stored in data tables in the IUP. During execution, the functional modules reference those tables to tailor the application to the user's requirements.

Release 2

Major features available with Release 2 include;

- Improvements in standard processing.
- Improvements in special processing.
- Additional auditor facilities.
- Rule generator enhancements.
- Conversational processing improvements.
- Non-conversational improvements.
- Batch improvements.
- System improvements.

Notice G320-5744-2, PDOM SH20-1931-3, and GI Manual GB21-9869-1.

MASS STORAGE CONTROL TABLE MAINTENANCE PROGRAM
5796 - PHY

Proper operation of the 3850 MSS is possible only if data in the Mass Storage Control's (MSC) Table Data Sets is valid. This IUP is designed to help the system programmer maintain these important data sets. It provides an interactive, conversational approach for maintaining them. It can substantially reduce the time required to perform system programmer and operator functions, including problem diagnosis, corrective actions, and queries regarding operational status.

The IUP executes under TSO or with a TCAM interface. It can be used from the operator's console to query status of the MSS via MSC table analysis. It can also be used in a Display Only mode or for Display and Update. All actions taken and associated output are logged to provide an audit trail.

Highlights

The IUP offers formatted and interpreted listings of the Mass Storage Control Table Data Sets. It allows the user to change selected tables using symbolic parameters and all tables by using hexadecimal dumps (even to the systems console) and specifying changes in hexadecimal format.

The benefits provided for the installation include:

    Reduction of elapsed time in 3850 recovery situations.
    Improved usability for system programmers and operators.
    Increased MSC Table security.

Functions provided for the installation include:

    Audit trail of all actions taken.
    Direct access to MSC Tables.
    Inquiry for MSS status.
    Display Only or Display and Update mode of operation.
    3270 Terminal support.

Notice G320-5742, PDOM SH20-1928, and Systems Guide LY20-2294. Marketing Guide ZZ20-3503.

IQRP/TSO INTERFACE
5796 - PHZ

This IUP provides the end user in a TSO environment with access to the Interactive Query and Report Processor (IQRP) IUP (5796-PDG).

The TSO Interface to IQRP operates as an independent TSO transaction. Since each TSO user obtains a unique copy of IQRP, multiple IQRP transactions can be processed concurrently. Controls have been established to preserve file integrity when file update transactions are processed. Reports may be printed on the terminal and/or directed to a predefined DASD data set at the user's option. Additionally, the end users may retain reports with or without their headings for subsequent processing.

Notice G320-5719, PDOM SH20-1890, Terminal User's Guide SH20-1909, and Systems Guide LY20-2273.

CMS EXEC ENHANCEMENTS
5796 - PJA

This IUP is designed to provide additional functions to expand the usefulness of the VM/370 CMS EXEC language.

It is a standard CMS command module which runs in the transient area and allows the EXEC writer to perform multiplication, division, and residue operations as addition and subtraction ... obtain current date and time in EXEC variables ... obtain read or virtual device type information ... search a file in a specific column for a particular character string ... search a list of values for a particular value ... determine if a member is defined in a library and obtain the starting record number of the member in the library and the size of the member ... obtain the values of specific parameters or options from the EXEC argument list and supply default values if no value was provided ... obtain the value of an option which follows a specific keyword and supply a default if the keyword is not in the option list ... return the values of local EXEC variables to the next higher level ... punch, stack, or type data which contains a specific number of embedded blanks and strings greater than eight characters ... read any record in a CMS file into EXEC variables ... place a CMS file on the console stack ... obtain data from the File System Table when only part of the file ID is known ... obtain virtual machine user ID or system level number ... set global EXEC variables which may be accessed from command to command.

Notice G320-5728, PDOM SH20-1922, and Systems Guide LY20-2279.

APL DECISION TABLE PROCESSOR AND CODE GENERATOR
5796 - PJB

This IUP is a set of interactive APL programs designed to help the user construct and maintain a library of limited entry decision tables and to compile the decision tables into procedural code in a high level language (COBOL, PL/I, APL, ALGOL).

The usual concerns of program debugging can thereby be eliminated, allowing the end-user to concentrate on the decision-making logic of the application.

Decision tables can be edited and validated for completeness and consistency. ALGOL, APL, COBOL, and PL/I code generators are provided. APL programs can be generated for immediate execution and testing. Programs in the other languages can be filed on a data set and be used as input to other language processors. A full coverage test case sequence for validating the object code is optionally produced.

A questionnaire processor is available as part of this system to guide an application user through a series of yes-no to produce a decision table map. The questionnaire is also useful for interactive checkout of table logic.

Notice G320-5738, PDOM SH20-1924, and Systems Guide LY20-2282.

THE COUNSELING PROCESS
A MANAGEMENT TRAINING COURSE
5796 - PJD

This IUP provides new or experienced managers with concepts and procedures used during employee counseling sessions. It provides a common base from which further in-depth discussion regarding counseling techniques may take place.

The course contains the following sessions:

    Introduction to Counseling
    Preparing to Counsel
    Discussion Techniques
    Actions Performed During Counseling
    Conducting the Counseling Session
    Case Study

A formal classroom setting is unnecessary since the course is presented interactively wherever a terminal is available. While the course was designed to be completed in one sitting (approximately one hour), it can be scheduled to accommodate job demands and terminal availability. Specific company policies can be incorporated in the corse by adding to or modifying the present course contents.

Upon completion of the course, managers should have an understanding of the basic techniques of counseling and know when, where, and how to use them. They should be able to describe the manager's role in a counseling session and how it differs from the employee's actions.

Notice G320-5739 and PDOM SH20-1925.

APL GPSS:
5796 - PJF (APLSV)
5796 - PJG (VS APL)

These IUPs are designed for use in carrying out simulation studies. They are written in APL and employ a modified subset of the GPSS language for ease of use by scientists, engineers, and analysts. The simple block diagram language of GPSS provides a quick, easily learned method of describing models. The interactive operation, under APL, allows concentration on problem solving and reduces the delays and some sources of error encountered in batch mode. Also, an investigator can have direct control over a simulation study and can expect to increase productivity by getting results more rapidly than in batch mode.

Notice G320-5745, PDOM SH20-1942, Reference Card GX20-2002, and Systems Guides (5796-PJF) LY20-2297 and (5796-PJG) LY20-2298.

IMS SPACE MANAGEMENT UTILITIES II
5796 - PJJ

The IMS Space Management Utilities II, an Extended Support IUP, can help to improve system performance and programmer productivity. They are designed to detect and report Hierarchical Direct (HD) pointer discrepancies, to provide statistics and information for HD tuning and to assist with segment restructuring and reloading during data base reorganization.

IMS Space Management Utilities II also designed to assist in managing OS/VS and IMS/VS data space.

Key Functions, Facilities, and Features

The following groups of programs and cataloged procedures are available:

- Hierarchical Direct Pointer Checker/H.D. Tuning utility - which monitors space utilization and then detects and reports physical or logical direct pointer problems.
- HDAM Physical Block Reload utility for reloading HDAM data bases during the reorganization process in physical block sequence. Conversion of non-HDAM data bases is made easier via this utility.
- Data Space Monitor utility can be used to track IMS data base growth rates, to assist in predicting the needs for reorganization or compression.
- Data Base Segment Restructuring utility provides the ability to modify individual segments and hierarchy within a data base.

Notice G320-5753, PDOM SH20-1952.

PRODUCTIVITY AID: DBPROTOTYPE II   5796 - PJK

DB PROTOTYPE II, an Extended Support IUP, is a design evaluation tool that provides performance statistics of initial IMS data base designs through the use of skeletal data bases and application program models. It provides many new features including an analytic modeling facility to estimate data base space and CPU and input/output time requirements, support of COBOL, PL/1, and Assembler for program modeling, and new ease-of-use facilities.

Key Functions, Facilities, and Features

- Provides CPU and input/output timings through an analytic modeling facility, reducing or eliminating the requirement to construct prototype data bases to obtain these data
- Generates, according to control card specifications a prototype data base that closely emulates the real data base. All valid DL/1 data base structures are supported
- Generates and executes call sequence prototypes against the prototype data base or actual data base
- Prints detailed timing and performance statistics for analysis by the user. The initial run of DP PROTOTYPE II establishes a design base. Successive runs with varying design parameters allow analysis of alternative designs.
- Provides support to evaluate use of IMS/VS functions including IMS/VS access methods, secondary indexes, program isolation, batch checkpoint/restart, and variable-length segments.

RELEASE 2.0

Provides the data base designer with both analytical and simulation tools which help find the right combination of design variables more effectively and at a lower cost than conventional hit-or-miss methods.

Major enhancements for Release 2 include:

- An analytic tool, DBCAP, for estimating the CPU time and I/O time required by the DL/1 calls of an IMS/VS application program.
- All known fixes for Release 1.

Notice G320-5754 and PDOM SH20-1953.

PRODUCTIVITY AID:
DISPLAY EDITING SYSTEM for CMS
5796 - PJP

This IUP is a full-screen editing system for VM/370 CMS. It is designed to use the features of both local and remote terminals. In addition to a comprehensive array of cursor and command oriented date manipulation functions, the IUP has direct usability in a wide range of user applications. Display terminals supported are the 3277 Model 2 and 3278 Model 2, including both the Text Processing and APL keyboards.

The Display Editing System accommodates CMS files of all types, including program source material, documentation, and data. It permits users to change portions of the display without program interventions. By placing the cursor on the position(s) requiring change, the user may re-enter the correct character(s). The Display Editing System checks for modifications made to the display image and makes permanent copies of the changes to the file.

The use of this IUP may provide substantial productivity gains resulting from reduced keystroke requirements, improved system response times, and efficiencies in both CPU resource utilization and data transmission.

Notice G320-5762, PDOM SH20-1965, and Systems Guide LY20-2311.

APL ADVANCED STATISTICAL LIBRARY (STATLIB2)
5796 - PJT (VSAPL)
APL ADVANCED STATISTICAL LIBRARY (STATLIB2)
5796 - PJR (APLSV)

These IUPs extend the statistical functions available in the previously released APL Statistical Library IUPs (5796-PGQ and 5796-PHW). The STATLIB2 IUPs consist of a set of 10 APL workspaces containing topics selected from the fields of multivariate analysis, time series analysis, and non-parametric statistics. STATLIB2 complements the APL Statistical Library, together they constitute a complete statistical library offering for the APL user. The functions provided include:

Multivariate Analysis - Factor Analysis ... Canonical Correlation ... Multiple Partial Correlation ... Classification Analysis ... Multivariate Analysis of Variance (MANOVA) ... Multivariate Analysis of Covariance ... Discriminate Analysis.

Time Series Analysis - Exponential Smoothing ... Autoregressive Methods ... Multi-Input Transfer Model Analysis ... Spectral Analysis

Non-paramentric Statistical Tests - Two Sample Cases ... K Sample Cases, both for nominal and ordinary levels of measurements ... Various Non-parametric measures of correlations. IUP 5796-PJR requires the installation of APL Shared Variables Release 2.1 (5799-AJF PRPQ WE1191) or APL Shared Variables Release 3 (5799-AQC PRPQ MG6282).

Notice G320-5811, PDOM SH20-1948, and Quick Reference Guide GX20-2021.

APL COMPUTER-AIDED INSTRUCTION COURSE
5796 - PJW

This IUP consists of a set of APL workspaces which constitute a self-teaching computer-aided instruction course for learning APL. The course is designed for problem solvers and programmers who want to learn to write APL programs.

Availability notice G320-5812 and PDOM SH20-2046.

MSS TRACE/SMF CORRELATION AID
5796 - PJX

This IUP consists of a set of programs developed to assist an installation with a 3850 Mass Storage Subsystem in evaluating system and subsystem performance.

Workload balancing and problem determination for the 3850 requires knowledge of both host CPU and MSS activity. Correlation of event activity between CPU hosts and MSS requires the use of common data elements recorded in each of the respective activity journals, System Management Facility (SMF), and MSS Trace. The IUP analyzes data collected by SMF and MSS Trace and generates reports and time-based plots of activity within the MSS and host CPU, thus allowing correlation of these two sources over time. The correlation will show processing peaks and can aid in work rescheduling to reduce or eliminate system or subsystem saturation periods. Situations such as cylinder faulting can be directed and investigated by correlation of SMF job, step and data set information-with the stage/destage activity as recorded by MSS Trace.

To realize the full recording capabilities of this IUP, the user must install the Job Data Compression Aid IUP (5796-PHN); collect full SMF data and process this data with the JDCA IUP. However, the MSS Trace/SMF Correlation Aid IUP may be used without JDCA to process only on MSS Trace data.

Notice G320-5810, PDOM SH20-2045, and Systems Guide LY20-2318.

HOST REMOTE NODE ENTRY SYSTEM
5796 - PJY

This IUP provides the capability of making a VS1 system a remote job entry station to any OS/VS2 MVS/JES2 or SVS/HASP system or another OS/VS1 system. (In an OS/VS1 to OS/VS1 configuration, the IUP could be installed on both CPUs, but is not required.) This program running in a VS1 partition will; automatically sign-on to MVS/JES2 or SVS/HASP, SCAN the specified VS1 input queues and send all jobs found there to MVS/JES2 or SVS/HASP for execution, receive all output from MVS/JES2 or SVS/HASP and will disperse it to the originator at either a local printer/punch or to an RJE printer/punch, provide all MVS/JES2 RJE commands to the VS1 operator, and allow sign-off from the VS1 console.

Notice G320-5813, PDOM SH20-2047, and Systems Guide LY20-2351.

APL DATA INTERFACE:
   5796 - PJZ ... VS APL under TSO
   5796 - PKA ... VS APL under VM/370 (CMS)
   5796 - PKB ... VS APL under VSPC
   5796 - PKC ... APLSV

This IUP is intended for business planners, forecasters, analysts, production controllers, researchers, and other professionals who manipulate large amounts of data. It was developed within IBM to provide professionals having no programming skills with an online, easy-to-use tool for satisfying most of their own data processing requirements. At IBM, this IUP helps to reduce programming costs and delays while providing decision makers with immediate answers to unanticipated questions.

Working at an APL terminal, an end-user describes the data file to be processed via interactive, prompting messages and is then able to process queries into the data. User data can originate from an external DOS or OS system, and information in two separate files can be linked together through common data.

An end-user can extract information using 'and/or' logic, 'less than' or 'equal to' relational terms and computed values. Functions are provided to manipulate extracted information in standard ways; i.e., sum, count, sort, subtotal, and accumulate statistics. Knowledge of APL is not necessary, although the full power of APL is available to the end-user who may require further data manipulation and who can program in APL.

The program supports a full range of expected users, from a single user/file to a multi-user/file environment with provisions for system administration and security.

Notices G320-5758 and G320-5815 (5796-PJZ), PDOM SH20-1954, and Systems Guide LY20-2305.

GENERAL CROSS ASSEMBLER GENERATOR
5796 - PKD

This IUP is a system of programs designed to dramatically reduce the time and cost to create basic program assemblers for a wide variety of computer architecture. The entire system is implemented in APL.

A cross-assembler is an assembler which runs on one computer to assemble code for anther computer. The first computer is called the host computer, and the second is called the target computer. The IUP takes advantage of the fact that only 25-30% of an assembler is dependent on the design of the target computer. If the host computer is held constant, then only target computer dependencies need be changed to vary from one assembler to another. Furthermore, the portion of the assembler that is changed has a high degree of regularity and usually can be generated from only one or two pages of descriptive material.

The IUP:

* Provides end users capability to rapidly define computer assembler
* Can run in any VS APL, APLSV environment
* Users need not know APL
* Prompting module leads user through assembler definition
* Core patching capability

Notice G320-5824, PDOM SH20-2060, and Systems Guide LY20-2355.

DL/1 DOS/VS SPACE MANAGEMENT UTILITIES
5796 - PKF

The DL/1 DOS/VS Space Management Utilities, Extended Support IUP, can help to improve system performance and programmer productivity. They are designed to detect and report Hierarchical Direct (HD) pointer discrepancies, to provide statistics and information for HD tuning and to assist with segment restructuring and reloading during data base reorganization.

The following groups of programs and cataloged procedures are available:

* Hierarchical Direct Pointer Checker/H.D. Tuning utility - which monitors space utilization and then detects and reports physical or logical direct pointer problems.
* HDAM Physical Block Reload utility for reloading HDAM data bases during the reorganization process in physical block sequence. Conversion of non-HDAM data bases is made easier via this utility.
* Data Space Monitor utility can be used to track IMS data base growth rates, to assist in predicting the need for reorganization or compression.
* Data Base Segment Restructuring utility provides the ability to modify individual segments and hierarchy within a data base.

Notice G320-6072, PDOM SH20-2107.

VSAMZAP
5796 - PKG (DOS/VS)
5796 - PJQ (OS/VS)

These IUPs are intended for the VSAM user who needs the ability to inspect and modify individual records in any type of VSAM data set. Both provide either card or system console input and printer output, and support password protection of data sets.

these programs can be valuable in the repair of records damaged by programming or I/O errors as well as establishing special conditions for testing.

Notice G320-5826, PDOM-DOS/VS SH20-2063, and PDOM-OS/VS SH20-2062

BULK DATA TRANSFER
5796 - PKK

This IUP provides users of NJE for JES2, HASP/NJI, and ASP/NJI with the capability to transfer data sets from one node in a network to another. This requirement is common to a number of customers who wish to transmit large data files between geographically separated systems or co-located systems via the channel-to-channel adapter.

This IUP is compatible with programming RPQ P09009 under HASP/NJI; therefore, bulk data transfer can be implemented between this IUP in one node of a network and the programming RPQ in another node of the same network. Use of this IUP with NJE for JES2, HASP/NJI, and ASP/NJI allows bulk data transmission between any combination of these environments.

Availability notice G320-6060, PDOM SH20-2088, and Systems Guide LY20-2367.

HIGH SPEED SEQUENTIAL RETRIEVAL (HSSR)
FOR IMS/VS DATA BASES
5787 - LAA

This IUP was designed to reduce the CPU time required for sequential retrieval of large physical IMS data bases.

The HSSR functions can be substituted for basic DL/I retrieval calls in IMS batch programs. An application program using HSSR issues the DL/I calls to HSSR instead of DL/I. The structure of the application program is the same for HSSR and DL/I. The segments returned to the application program from HSSR are the same as if the call had been handled by DL/I. HSSR has an option to have all data base calls handled by both HSSR and DL/I. Segment and feedback information returned are compared by the HSSR compare option.

Notice G320-6100 and PDOM SH20-2169.

LIST PROCESSOR/370 (LISP/370)
5796 - PKL

This IUP is a programming language designed for processing complex structured data with an emphasis on list and tree structures. It features automatic storage management, easy definition of recursive

functions, conversational execution/debugging features, and an interpreter which can directly evaluate symbolic expressions of programs without prior compilation. These features all contribute to increasing the efficiency of the LISP programmer.

Availability notice G320-6061, Marketing Guide ZZ20-4287, and PDOM SH20-2076.

FORTRAN H EXTENDED OPTIMIZATION ENHANCEMENTS
5796 - PKR

This IUP provides users of the FORTRAN H Extended Compiler and Library program products with a higher level of program optimization. The resulting compiled programs approach the quality of the best programs normally written by skilled assembly language programmers.

Notice G320-6064 and PDOM SH20-2100.

QUERY-BY-EXAMPLE VM/370 CMS
5796 - PKT

This IUP is a high-level, interactive language facility which provides easy access to data by end users not necessarily skilled in data processing techniques. It features a unique, two-dimensional, user interface which is simple to use yet powerful and flexible. It can be easily learned in a few hours.

Query-By-Example (QBE) provides a powerful facility for answering complex queries which can be expressed by the end user in familiar terminology and logic.

Operations which can be performed during an interactive session with QBE include retrieval, insertion, deletion, update, and creation of data in the form of tables. These operations may be performed on entire tables, entire rows, entire columns or on one or more individual data elements.

QBE is designed to operate with the System Extensions program product (5748-XE1) or the Basic System Extensions program product (5748-XX8).

Notice G320-6062, PDOM SH20-2077, and terminal user's guide SH20-2078.

IMS-APL DATA LINK FOR TSO
5796 - PKW

This IUP was developed to satisfy the need to link a personal computing facility (APL) with a user's IMS data base system. This link allows an APL user to submit IMS transactions to one or several IMS systems from an APL workspace; the output can be returned to the workspace for display or further manipulation.

Notice G320-6065, PDOM SH20-2101, and Systems Guide LY20-2369.

ACF/VTAM AND NOSP DEFINITION AID
5796 - PKY

This IUP assists the ACF/VTAM Multi-System Networking Feature (MSNF) user in defining and maintaining the network. The program generates the resource definitions required in multihost communication. Additionally, it generates some of the definitions for the Network Operation Support Program (NOSP). These facilities improve the efficiency of the system programmer in the initial definition and in making updates to the network.

Notice G320-6069 and PDOM SH20-2104

VM/370 SPOOLING SUPPORT FOR LOCAL 328X PRINTERS
5796 - PKZ

This IUP provides VM/370 users with the ability to spool and print CMS files on a local 3284, 3286, 3287, 3288, or 3289 hardcopy printer. Currently, users must print their files on the system printer or use the PF key to copy the screen image to a local hardcopy printer.

This IUP supports the Data Analysis - APL feature and the Vertical Forms Control feature on the 328X printers. All of the current 3272 or 3274 buffer sizes are supported.

Notice G320-6073 and PDOM SH20-2079.

IMS - APL DATA LINK FOR VSPC
5796 - PLA

This IUP provides a link to a personal computing facility (APL) with a user's IMS data base system. This link allows an APL user to submit IMS transactions to one or several IMS systems from an APL workspace; the output can be returned to the workspace for display or further manipulation.

Availability notice G320-6054, PDOM SH20-2073, and Systems Guide LY20-2358.

OPERATOR TRAINING MINI-COURSES CONTROLLING JES2 I/O DEVICES
5796 - PLD

This IUP consists of 14 mini-courses that cover JES2 description and command notational conventions, functions of commands to control I/O devices, I/O device designations and states, and controlling readers, printers, punches, and RJE lines. It operates with the Interactive Instructional System (5748-XX6) and is designed for computer operators who are beginning to work with JES2 as well as operators experiences with JES2 sho need to refresh their knowledge. Operators may take each mini-course on terminals at their work locations as often as they desire in any sequence.

Notice G320-6067, PDOM SH20-2109, and Student Material SH20-2113.

IMS-CMS DATA LINK FOR VM/370
5796 - PLE

This IUP was developed to satisfy the need to link a personal computing facility (APL under CMS or a CMS address space) with a user's IMS data base system. This link allows a user to submit IMS transactions to one or several IMS systems from a CMS address space or an APL work space; the output can be returned to the address space or work space for display or further manipulation.

Notice G320-6098, PDOM SH20-2166, and Systems Guide LY20-2416.

STAIRS/VS TRAINING COURSE
5796 - PLF

This IUP, a computer-based training course, teaches personnel individually at terminals how to use the important online commands of STAIRS/VS. The course enables end-users to take advantage of the full complement of commands for selecting and accessing documents from STAIRS data bases. The IUP operates with the Interactive Instructional System program product (5748-XX6).

The IUP is designed for a wide variety of personnel including adminstrative, managerial, and professional who are end-users of either STAIRS/VS (5740-XR1) or STAIRS/DOS/VS (5746-XR4).

No formal prerequisites are needed to complete this course. However, familiarity with use of the IBM 3270 terminal is helpful.

Notice G320-6078, CDAM SH20-2111, and Reference Card GX20-2331.

DATA EXTRACTION, PROCESSING AND RESTRUCTURING SYSTEM
5796 - PLH

The Data Extraction, Processing and Restructuring System is a data restructuring tool used for conversion of files into DL/1 data bases for distributed data processing, planning, research or query. It can also be used to audit the validity of data in a data base.

Notice G320-6160, PDOM SH20-2177 and SH20-2178.

ADMINISTERING THE INTERACTIVE INSTRUCTIONAL SYSTEM
5796 - PLJ

This computer-based training IUP is for personnel who are administrators of the Interactive Instructional System (5748-XX6). The course teaches the major functions of an administrator, IIS system components, and high activity IIS administrator commands. Included are how to set up and use IIS files, how to provide basic author and student services, and how to estimate resource requirements for IIS operations. Consideration is given to both central site and remote location student support. Although certain parts of the course are applicable for administrators with the IMS versions of IIS, there are differences in this environment which are not addressed. Therefore, the course is only for installation with IIS operating in environments other than IMS.

Notice G320-6094 and PDOM SH20-2162.

RACF CODES UPDATE SYSTEM
5796 - PLK

This IUP is a fully automated password generation and auditing system. It provides the installation with the ability to update RACF user-type passwords and/or audit their users within any desirable time frame. With the use of the RACF/Codes Update System (RACF/CUS), a RACF installation can centralize the control of the password assignment and change functions which are normally a RACF user's responsibility.

The RACF/CUS is designed to be used with snap-out form-type mailers, which are readily available from various form vendors. The program prints the new password, name and address, and any user message on the cover sheet of the special form. This cover sheet is removed and held as the master listing and is used for the auditing process. The new password and message are printed only on the cover sheet and on the inside part of the form. This is accomplished by the arrangement of carbons within the mailer envelope. The new password is visible only when it is separated from the envelope portion of the multi-part form.

Notice G320-6093 and PDOM SH20-2161.

PL/1 LANGUAGE CONSTRUCTION PREPROCESSOR
CAMBRIDGE SCIENTIFIC CENTER
5796 - PLL

This IUP is a generally applicable preprocessor for PL/1, similar in many ways to the built-in preprocessor, but much more efficient when a large number of new language statements must be defined. Using it, one may create a "language within a language" (i.e., a set of commands for simulation, data base access, graphics, etc.) which will be translated to PL/1 code. The program will take as input a file consisting of new language commands and, optionally, interspersed PL/1 statements and produce a file of PL/1 statements acceptable as input to the PL/1 compiler. Command names can be identified by context, so that it is unnecessary to prohibit their use as PL/1 variable or array names. The user must supply an external PL/1 procedure for each new language statement to generate the appropriate expansion. The user is allowed full use of the PL/1 language (as opposed to the limited use permitted by the built-in preprocessor). Efficiency is achieved by pre-compiling the language expansion routines and by avoiding any extra processing for an unreferenced command.

Notice G320-6096, PDOM SH20-2164, and systems guide LY20-2414.

A DEPARTMENTAL REPORTING SYSTEM, VERSION II
5796 - PLN

A Departmental Reporting System is a general-purpose time-sharing application system designed for direct use by the business professional. It provides an organization with a single comprehensive system to assist in applications involving data analysis inquiry, and report generation.

New Features available in Version II include:

- Extended support
- Use of VSAPL Release 3, and support for the CICS/VS, VM/CMS, VSPC and MVS-TSO environments
- Full screen processing
- Additional report formatting facilities
- Preprocessing capability (sorting, selecting and computing)
- Graphic presentation
- New computation and calculation capabilities
- Multifile data inquiry
- Express mode processing
- Command stacking
- Terminal independence
- Significant performance improvements

Notice G320-6097, PDOM SH20-2165, and Systems Guide LY20-2415.

APL HANDBOOK OF TECHNIQUES WORKSPACE
5796 - PLP

This IUP provides users of VS APL with a machine-readable equivalent of the publication: "The APL Handbook of Techniques" (S320-5996). It may be installed on VS APL systems running with VSPC, VM/370-CMS, and TSO. (Note: The APL interface to TSO is provided by the IUP VS APL for TSO, Yale University, 5796-ALB). With this IUP, users of the "APL Handbook of Techniques" may develop new APL applications quickly and efficiently. With the use of english-like expressions such as "Costdata Beside Years" application development time may be reduced appreciably.

Notice G320-6153, PDOM SH20-2170, and "The APL Handbook of Techniques" S320-5996.

VSE PERFORMANCE TOOL (VSE/PT)
5796 - PLQ

VSE/PT, an extended support IUP, is a software monitor that measures the performance of an IBM system operating under either DOS/VSE or DOS/VS in a non-VM/370 environment. It uses both statistical sampling and event tracing to record system status on an output data file. This data is used later to produce a series of reports on both hardware and software performance during selected time intervals.

Notice G320-6155, PDOM SH20-2171, and Systems Guide LY20-2418.

INTERACTIVE CIRCUIT DESIGN
5796 - PLR

This IUP is a powerful general purpose circuit analysis and design program implemented in APL. Because it was developed to be user-oriented and is highly interactive, one may now accomplish in minutes what previously took hours and days via conventional batch processing methods. This savings in turnaround time can substantially reduce circuit design costs while improving the quality of the design.

Notice G320-6164, PDOM SH20-2336, and Systems Guide LY20-2423.

THE JES3 MONITORING FACILITY II (JMF II)
5796 - PLW

The JES3 Monitoring Facility II (JMF II) provides the MVS/JES3 user
with information on the activities and resource utilization of JES3. This
information can be used to assist in evaluating the performance of an
existing MVS/JES3 system and to understand the impact of particular
JES3 functions on the entire system. Used on a regular basis, JMF II
can assist in identifying changes in the JES3 environment which may
affect overall JES3 performance. This information may also be useful
in planning for future growth of the system.

Notice G320-6159, PDOM SH20-2176, and Systems Guide LY20-
2421.

VS APL EXTENDED EDITOR AND FULL SCREEN MANAGER
5796 - PLY

This IUP is a powerful extension to the VS APL program product
(5748-AP1) and the Yale University IUP, VS APL for TSO (5796-ALB).

The extended editor is written in S/370 Assembler Language and runs
under the Conversational Monitor System (CMS) or the Time Sharing
Option (TSO) of OS/VS. It is a replacement for the standard editor
(del-editor) of VS APL for these environments and utilizes the IBM
3270 Display System to enhance programmer productivity. It supports
the hardware, full screen editing features of the 3270 Display System
and also supports IBM 2741 devices in non-full screen mode.

The full screen manager is an auxiliary processor that enables the APL
programmer to manipulate the 3270 console in full screen mode. It is
similar to the APL 124 auxiliary processor for VSPC and CICS but has
additional capabilities not available in the VSPC and CICS versions.
The full screen manager auxiliary processor enables the APL
programmer to create full screen APL applications that enhance the
human factors of user interactions.

Notice G320-6168, PDOM SH20-2341, and Systems Guide LY20-
2426.

SOURCE COMPARE/AUDIT UTILITY
5796 - PLZ

The Source Compare/Audit Utility accepts text input from two files and
produces various print/update/summary files detailing source line
matches, insertions, deletions and reformats. Input files can be
sequential data sets, OS/VS partitioned data sets or partitioned data
set members.

The Source Compare/Audit Utility features speed, capability, simplicity
of use and accuracy through a unique algorithm which maintains
synchronization by locating the largest sets of matching lines between
data sets. It then recognizes missing or added lines by their occur-
rences between matching sets. This mechanism is unique and highly
accurate.

Notice G320-6163 and PDOM SH20-2361.